SOCIAL ATTITUDES TOWARD MEN AND WOMEN WITH POSTTRAUMATIC STRESS DISORDER

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Although men are more likely to experience traumatic events, the risk of developing Posttraumatic Stress Disorder is at least twice as high in women than in men after exposure to comparable traumas. These findings are more consistent in response to some types of trauma (e.g., assaultive violence) than others (e.g., natural disaster). There has been very little systematic study of the sources of these gender differences. This study began to explore the contribution of gender-related beliefs about appropriate responses to trauma by investigating the impact of victim sex and trauma type as well as participant sex, sex-role orientation, and personal trauma history on attitudes towards victims. Ninety-three male and 179 female students were administered the Bem Sex Role Inventory, the Trauma History Questionnaire, and a vignette measure of attitudes towards victims. Participants evaluated male victims significantly less favorably than female victims, and females had more positive attitudes towards victims than males. Feminine sex-typed and androgynous women rated victims more favorably than masculine sex-typed men and women. The interaction between sex of victim and trauma type was not significant. A positive relation was observed between personal trauma exposure and attitudes towards male victims among male participants only. These findings contribute towards a theoretical understanding of gender and PTSD, and also have important clinical applications.

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CHAPTER 1

INTRODUCTION

Since the formal recognition of Posttraumatic Stress Disorder (PTSD) as a diagnostic entity with the publication of the third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association) in 1980, there has been a plethora of research exploring multiple aspects of this disorder. Epidemiological studies have increased our knowledge of the range and scope of traumatic events experienced by the general population as well as specific groups, and of factors associated with the development of symptoms. An interesting finding has emerged from numerous studies: whereas men are more likely to experience many types of trauma (with the notable exception of rape and sexual assault), women appear to be more vulnerable to developing PTSD following exposure to comparable events. These effects have been observed as particularly consistent in regard to experiences of criminal or interpersonal violence (Breslau, Chilcoat, Kessler, Peterson & Lucia, 1999; Saxe & Wolfe, 1999; Stein, Walker & Forde, 2000). Although a number of possible theoretical and methodological explanations for this phenomenon have been proposed, the sources of these sex differences have received very limited systematic study. Starting from the theoretical premise that sex differences in the rate of PTSD at least partly reflect social expectations and norms regarding gender-appropriate responses and behavior, the present study explores the nature of attitudes toward men and women with PTSD symptomatology. The

influence of two different types of trauma on these perceptions will be examined: criminal assault, in regard to which sex differences in psychological impact consistently have been found; and natural disasters, in regard to which findings regarding sex differences are more equivocal. The impact of the perceiver characteristics of sex, gender-role orientation, and trauma history will also be investigated.

The following literature review begins with a brief description of the history and current conceptualization of PTSD in order to provide a context for the discussion of epidemiological findings. Findings regarding rates of trauma and PTSD in the community and in two specific high-risk populations are then reviewed. Specific findings regarding sex differences in prevalence are highlighted, and methodological and theoretical explanations for this phenomenon are presented. The role of gender and gender stereotypes in social cognition is then explored, with a focus on beliefs about emotional experience and expression that may directly influence attitudes toward traumatized individuals. Next, literature pertaining to attitudes toward victims is reviewed; relevant factors that have been found to influence such attitudes are identified. The introduction concludes with a summary of the existing state of knowledge and presentation of the purpose and specific hypotheses of the present study.

Post-traumatic Stress Disorder

History

Posttraumatic Stress Disorder made its debut into the diagnostic classification systems of contemporary psychiatry and psychology with the publication of the DSM-III (APA, 1980). However, the notion that extreme stress can create psychological damage is

not new. The earliest scientific discussions about the effects of trauma took place in the mid-1800's and focussed on whiplash injuries and "railroad spine". The observation of the frequent occurrence of cardiovascular symptoms in traumatized persons, particularly combat soldiers, led to descriptions such as "irritable heart" and "soldier's heart". Charles Samuel Myers, a British military psychiatrist, was the first to use the term "shell-shock" in the medical literature in 1915 to describe psychological breakdowns experienced by soldiers in combat (van der Kolk, Weisaeth, & van der Hart, 1996). Psychoanalytic theorists represented another group of important contributors to an understanding of impact of traumatic events on mental health. Based on the earlier work of Briquet and Charcot on the subject of hysteria, by the mid-1890's Janet in France, and Freud and Breuer in Vienna, arrived independently at the conclusion that this condition was caused by psychological trauma (Herman, 1992a).

Current formulations of PTSD owe much to American psychiatrist Abram Kardiner (1947; 1959) who, based on his work with World War I veterans, delineated the central features of what he described as the "war neuroses". Years later, in preparation for the publication of the DSM-III, Kardiner's conceptualization was combined with literature on Holocaust victims, accident and burn victims, Vietnam veterans, and victims of rape and abuse. This collection of data was distilled into common critical elements and formed the basis of the new diagnostic category (van der Kolk et al., 1996). Yehuda and McFarlane (1999) pointed out that although diagnostic systems prior to the DSM-III recognized that stress could contribute to psychiatric symptoms, these models regarded enduring symptoms as being caused mainly by premorbid vulnerability. They suggest

that the primary conceptual shift in including PTSD as a diagnostic category was to resolve the quandary as to how to classify a chronic condition developed by normal people who had experienced a very traumatic event. This formulation implied that PTSD involved a natural process of adaptation to an adverse situation and that the development of symptoms was not determined by constitutional vulnerability.

Current Conceptualization

The diagnosis of PTSD was further revised with the publication of the fourth edition of the DSM (APA, 1994), as the research generated by the formal recognition of PTSD resulted in changing conceptualizations of this syndrome. For example, in recognition of the finding of high rates of trauma in the general population, the DSM-III specification that traumatic stressors must be rare and beyond the realm of usual human experience was dropped, and was replaced with a definition that includes subjective trauma characteristics (Acierno, Kilpatrick & Resnick, 1999).

According to the DSM-IV, in order to receive a PTSD diagnosis, the individual must have experienced or witnessed a traumatic event that involved actual or threatened death or serious injury to the self or others, and that engendered intense feelings of fear, helplessness or horror. Examples of such events listed in the DSM-IV include military combat exposure, violent personal assault (e.g., sexual assault, robbery), natural or human-made disasters, severe automobile accidents, and being diagnosed with a life-threatening illness. The symptoms of PTSD are organized into three clusters: re-experiencing the trauma in ways such as intrusive thoughts, dreams or flashbacks; avoidance of stimuli associated with the trauma, as well as general emotional numbing;

and increased arousal evidenced by symptoms such as irritability and hypervigilance. Symptom duration of more than one month and clinically significant functional impairment are required for a PTSD diagnosis. The DSM-IV distinguishes between acute and chronic PTSD depending on whether symptom duration is less or greater than three months, and also indicates that onset may be delayed.

The DSM-IV also added a new related diagnostic category of Acute Stress Disorder (ASD) to address immediate reactions to trauma. Features include dissociative and PTSD symptoms of at least two days' duration which also cause functional impairment. Posttraumatic stress disorder and ASD are presently classified as anxiety disorders although this classification remains controversial, with some arguing that these disorders have more in common with the dissociative disorders (Brett, 1996) which are frequently also assumed to have a traumatic origin.

Although such controversies continue regarding the manner in which the response to trauma may be best conceptualized, the last 20 years since the official recognition of PTSD have been marked by tremendous progress in the study of traumatic stress disorders. Areas that have received particular attention include epidemiology of PTSD, factors influencing vulnerability and course of the disorder, developmental impact of trauma, psychobiology of trauma, relationship between PTSD and the dissociative disorders, and approaches to treatment (van der Kolk et al., 1996). The findings of epidemiological studies will now be reviewed.

Epidemiology of Trauma and PTSD

The experience of trauma and PTSD has been the subject of extensive epidemiological study. The DSM-IV (APA, 1994) estimates that an extreme range of 3 – 58% of "at-risk" individuals (eg. combat veterans, victims of criminal violence) develop PTSD. This large variance would appear to be at least partly due to differences in the nature and severity of traumatic events. As shall be seen in the following review, some types of events would appear to be experienced as more traumatic than others and produce higher rates of PTSD. The following sections will review the literature on rates of trauma and PTSD in three civilian populations frequently examined in epidemiological studies: the community (or general population), individuals exposed to criminal victimization, and individuals exposed to natural disasters. It should be noted that an extensive literature exists regarding other trauma populations such as combat veterans and victims of political violence, technological disasters, and childhood abuse. The two specific populations reviewed here, victims of criminal violence and natural disasters, were chosen because they vary in the consistency with which sex differences in PTSD have been described, and because the trauma types vary on dimensions that may be relevant to gender-based responses. Each section will begin with consideration of general epidemiological findings with regard to that population and will then focus on findings regarding sex differences. This review will focus primarily on research involving adult men and women in the United States, in order to facilitate comparisons across studies. For a more extensive review of findings concerning other age-groups or trauma

populations, the reader is referred to other sources (e.g., Wolfe & Kimerling, 1997; Norris, Foley, & Weisshaar, in press).

General population studies. As was noted earlier, studies of the prevalence of various traumatic events among the general population have indicated that such events are not beyond the realm of normal human experience. Breslau, Davis, Andreski, and Peterson (1991) surveyed a large sample of young adults and found a lifetime prevalence of exposure to traumatic events of 39.1 percent. The most commonly experienced traumatic events were sudden injury or serious accident, physical assaults, seeing someone seriously injured or killed, and learning about sudden death of a close relative or friend. The rate of PTSD among those exposed to traumatic events was 23.6%, yielding a lifetime prevalence of 9.2% in the total sample. Rates of PTSD differed slightly but not significantly among types of events (rates ranged from 11.6% for sudden injury or serious accident, to 24% for threat to life). Rape was a marked exception with 80% of exposed women meeting criteria for PTSD. Breslau et al. (1991) found that exposure to traumatic events was significantly more common among men than women (43% of men versus 37% of women in a community sample had experienced at least one trauma). The pattern of the distribution of traumatic events was similar for men and women, except for rape, which was reported only by women. Female sex was identified as a risk factor for developing PTSD: 30.7% of women versus 14% of men exposed to at least one traumatic event met criteria for PTSD. This finding, however, appeared to be largely accounted for by women's exposure to rape. In a subsequent study, Breslau and Davis (1992) found that female sex was also a risk factor for PTSD chronicity, with women four times more

likely than men to continue to meet criteria for the disorder one year or more after the traumatic event.

Davidson, Hughes, Blazer and George (1991) conducted a large epidemiological study of residents of a region of North Carolina. They found that the mean number of traumatic events experienced per person was 1.6. Lifetime prevalence of PTSD was 1.3%, although this increased to 7.9% if individuals with sub-threshold PTSD symptoms were included. More than two-thirds of the PTSD group were female. Cottler, Compton, Mager, Spitznagel, and Janca (1992) also found that female sex predicted PTSD in a survey of substance abusers from the general population, when other variables were controlled.

Subsequent studies have found substantially higher prevalence of traumatic events and PTSD. Norris (1992) found that 69% of a diverse community sample had experienced at least one traumatic event over their lifetimes, as had 21% within the past year alone. The most frequently experienced event involved tragic death of a family member or close friend. Rates of PTSD ranged from 2% to 14% depending on the nature of the event experienced. The highest rates of PTSD were reported in regard to sexual assault, followed by physical assault and motor vehicle accidents; the lowest rates were reported for combat trauma. Among the total group of respondents exposed to a traumatic event, approximately 7% reported PTSD. Motor vehicle accidents represented the most adverse combination of frequency and impact. Norris (1992) found that significantly more men than women reported lifetime exposure to at least one traumatic event (73.6% vs. 64.8%). Men were significantly more likely to report exposure to

lifetime physical assault, motor vehicle crash and combat; whereas women were more likely to report lifetime exposure to sexual assault. Norris observed a statistically significant sex difference in rates of PTSD related to crime, with women exhibiting PTSD rate more than twice that exhibited by men (12% vs. 6%).

Kessler, Sonnega, Bromet, Hughes, and Nelson (1995), in the National Comorbidity Study based on a national probability sample of adult US residents, found that 60.7% of men and 51.2% of women in the general population reported lifetime exposure to at least one traumatic event. The majority of people with some type of lifetime trauma had actually experienced two or more types of trauma. The types of trauma experienced by the largest proportion of people were witnessing someone being badly injured or killed, being involved in a fire, flood or natural disaster, and being involved in a life-threatening accident. The estimated lifetime prevalence of PTSD in the total sample was 7.8%. Traumas associated with a high probability of developing PTSD included rape, combat exposure, childhood physical abuse and sexual molestation, physical attack and being threatened with a weapon. Kessler et al. (1995) also found that men in a general population sample were more likely to report exposure to a traumatic event than women (60.7% vs. 51.2%); however, women's lifetime rate of PTSD was twice as high as that of men (10.4% vs. 5.0%). A significantly higher proportion of men than women reported witnessing someone being badly injured or killed, being involved in a fire or natural disaster; being involved in a life-threatening accident, being physically attacked, experiencing combat, being threatened with a weapon, being held captive, or

kidnapped. A significantly higher proportion of women than men reported rape, sexual molestation, childhood parental neglect, and childhood physical abuse.

In a large national study involving women only, Resnick, Kilpatrick, Dansky, Saunders, and Best (1993) found that lifetime exposure to any traumatic event was 69%; exposure to crimes that included sexual assault, aggravated assault, or homicide of a close relative or friend was reported by 36% of respondents. A lifetime history of completed rape was reported by 12.7% of their sample, and 10.3% of the women reported having experienced at least one aggravated assault. Less than half of all crime victims had experienced a single incident of a single crime type; all other crime victims had experienced either more than one type of crime and/or multiple incidents of a single crime type. The overall sample prevalence of PTSD was 12.3% lifetime and 4.6% within the past 6 months (17.9% lifetime and 6.7% current of those who had a history of any trauma type). The rate of PTSD was significantly higher among crime victims than among those reporting other types of trauma (25.8% vs. 9.4%). A history of incidents including direct life threat or actual injury was a risk factor for PTSD.

A recent epidemiological study investigated one possible explanation for the noted sex differences in PTSD: women's greater vulnerability to developing PTSD following assaultive violence. Breslau et al. (1999) found that the lifetime prevalence of exposure to traumatic events was significantly lower in females than in males (87.1% vs. 92.2%) in a community sample. Females had a significantly lower prevalence of experiencing assaultive violence than males as well as experiencing other injury or shocking event (eg, serious car accident, witnessing killing or serious injury). Within the

category of assaultive violence, women had significantly higher rates of experiencing rape and other sexual assault, but significantly lower rates of experiencing other types of assaultive violence such as being shot, stabbed, mugged, or being badly beaten. A significant sex difference was also found in rates of military combat, although rates in the entire sample were low. Within the category of other injury or shocking events, males were significantly more likely to have experienced serious accidents and to have witnessed acts of violence, but no sex differences were found for experiencing a natural disaster or receiving a diagnosis of a life-threatening illness. There was very little sex difference in rates of learning about traumas to others, and sudden unexpected death of a loved one. Despite the lower prevalence of most trauma types among women, Breslau et al. (1999) found that the probability of developing PTSD among those exposed to trauma was approximately twice as high for females than for males (13.0% vs 6.2%), even when sex differences in the distribution of trauma types is taken into account. The sex difference in conditional risk of PTSD was due primarily to greater risk to females after assaultive violence (35.7% vs. 6.0% in males). They found that more than 50% of female PTSD cases in the community, as compared to 15% of male cases, were attributable to assaultive violence. Their analyses suggest that higher risk for PTSD in females is not a generalized vulnerability but is observed mainly with regard to effects of assaultive violence.

Stein et al. (2000) obtained similar findings to Breslau et al. (1999) regarding the specific effects of assaultive violence in a large epidemiological study in Canada. Seventy-four percent of women and 82% of men in this study reported lifetime exposure

to at least one form of trauma. Given any trauma exposure, current (i.e., past month) full or partial PTSD was present in 8.2% of women and 1.8% of men. Women were at significantly higher risk for PTSD following exposure to serious trauma even when sexual trauma was excluded. Women were found to be at higher risk for PTSD following nonsexual assaultive violence (e.g., mugging or other physical attack) but not following nonassaultive trauma (e.g., fire, motor vehicle accident).

Community studies thus indicate high levels of traumatic experiences among the general public with most studies reviewed indicating a lifetime PTSD prevalence ranging from 5 to 10 percent. The studies reviewed consistently reveal sex differences in the experience of trauma and development of PTSD: specifically, whereas men seem to experience more frequent traumatic stressors (with the exception of rape and sexual assault), the rate of PTSD among women is at least twice that of men. Some interactions between gender and specific trauma types (e.g., assaultive violence) have been identified.

Before concluding this section, it is worth noting that similar findings have been obtained among college students. Vrana and Lauterbach (1994) found that 84% of the undergraduate students in their sample reported having experienced at least one event of sufficient intensity potentially to elicit PTSD. One-third of their sample had experienced four or more such traumatic events. Participants who had experienced trauma reported higher levels of depression, anxiety and PTSD symptomatology than non-traumatized participants; these symptoms were more intense among individuals who had experienced multiple traumas. Males experienced a greater mean number of traumatic events than females, and were significantly more likely to have been in an accident or life-threatening

situation, been in a fire, witnessed a death, or been in combat. Females were more likely than males to have experienced rape or to have been in an abusive adult relationship. Males and females were found to differ on their psychological responses to specific traumatic events: women were more distressed than men by witnessing a violent death or injury, whereas men were more affected than women by child abuse and by events that they indicated were too traumatic to discuss openly. In a similar study, Bernat, Ronfeldt, Calhoun, and Arias (1998) found that approximately 67% of respondents in their college student sample reported exposure to at least one traumatic event. An estimated 4% of the full sample (12% of the traumatized individuals) met PTSD criteria within the last week. A significantly greater proportion of males than females reported experiencing serious injury, accidents, physical assaults, and witnessing serious injury or death. A significantly greater proportion of females than males reported experiencing sexual coercion and sexual assault. Greater trauma exposure and female gender were associated with higher levels of PTSD symptomatology. They also found that perceived life-threat during the most traumatic event accounted for a small but significant proportion of the variance in PTSD symptoms. However, peritraumatic reactions (specifically negative emotional reactions, panic symptoms, and dissociation) made significant contributions in the prediction of PTSD symptoms above and beyond vulnerability factors and objective stressor dimensions. Unlike the general population studies that were interview-based, the two studies involving college students used a self-report format.

Studies of crime victims. A relatively consistent finding across studies of crime victims is that rates of PTSD vary according to the nature of the crime, with more violent

crimes associated with higher risk for PTSD. Freedy, Resnick, Kilpatrick, Dansky, and Tidwell (1994) examined the mental health status of crime victims and their families, most of whom had been victimized within the last three years. Approximately half of the sample met diagnostic criteria for PTSD during their lifespan; one quarter of the sample scored positively for current PTSD. The strongest association was observed between crime type and PTSD for violent and sexual crimes. The positive lifetime prevalence for respondents who had experienced the homicide death of a family member was 71.1%; 59.4% of the physical assault victims had lifetime PTSD as did 55.2% of sexual assault victims. Fewer victims of typically less-violent crimes (e.g., burglary and robbery) reported symptoms meeting criteria for lifetime PTSD. Physical injury was significantly associated with PTSD prevalence in that injured crime victims were more likely than uninjured victims to have lifetime PTSD. Similarly, victims who feared injury or death during an assault were more than three times as likely to have lifetime PTSD than other victims. Freedy et al. (1994) also found that female crime victims were almost twice as likely as male victims to have lifetime PTSD; however they indicated that this association was likely due to a significant relation between gender and crime type. Women were overrepresented among crime types typically associated with a higher risk of developing PTSD, specifically sexual assault, homicide of a family member, and physical assault.

Riggs, Rothbaum, and Foa (1995) assessed male and female victims of non-sexual assaults at weekly intervals. At initial assessment within a month of the assault, 71% of women and 50% of men were diagnosed with PTSD. At the fourth assessment, 42.1% of the women and 31.8% of the men had PTSD. At the final assessment

approximately four months after the assault, 21.1% of women remained with PTSD, but none of the men met PTSD criteria. Women with persistent PTSD were more likely than recovered women to have believed their lives to be in danger during the assault. Many victims who did not meet the criteria for PTSD were experiencing individual symptoms. For example, over 40% of both men and women without a PTSD diagnosis reported increased startle reactions, hypervigilance and heightened emotional reactions to reminders; more than 20% reported persistent avoidance and restricted affect. A large proportion of men and women who did not meet PTSD diagnostic criteria three months after the assault did meet criteria for one or more of the symptom clusters.

Kilpatrick and Resnick (1998) analyzed findings of different studies of criminal victimization and concluded that rates of PTSD following rape and assault were higher than for other crimes. The lowest rates of PTSD, ranging from 16.7% to 33%, were associated with crimes of robbery, burglary, and some non-rape sexual assaults. Lifetime PTSD rates associated with rape, physical attack, and sniper attack ranged from 35% to 70%. In terms of indirect victims, 22.2% of rape victim partners (not present at time of assault) and 50% of a criminal-justice-identified sample of family members of sexual assault victims had PTSD at some time. Rates of PTSD were 23.4% and 24.8% for homicide survivors in two community samples, whereas a much higher rate (71%) was observed among a criminal-justice-system identified sample. No differences in rates of PTSD were found for witnesses or family members of criminal versus vehicular homicide. Rates associated with witnessing physical assault were minimal in community sample but were high (62.5%) for witnessing assault of a family member in a sample

drawn from the criminal justice system. Kilpatrick and Resnick (1998) pointed out that, in general, rates of PTSD associated with indirect victimization appear to be comparable with those associated with direct victimization, although data on indirect victimization were more limited.

Acierno, Kilpatrick, and Resnick (1999) noted in their review of the literature that PTSD risk is consistently elevated for women across studies of crime victims in which the sexes are compared. They point out that this finding is particularly noteworthy for physical assault, with women at about 10 times greater risk than men following assault. Rape would appear to produce equally high rates of PTSD in both sexes, but the low frequency of its reported occurrence in adult males makes comparisons difficult.

The studies reviewed above suggest that certain particularly violent and brutal assaults such as rape and severe physical assault are associated with significantly higher risk of PTSD. An associated finding is the observation that actual physical injury and perceived life threat are related to higher rates of PTSD. Consistent with the results of the general population studies, the research reviewed here suggests that women develop PTSD at higher rates than men when exposed to similar types of criminally violent events. Rape has been consistently identified as among the highest risk factors for PTSD (Kilpatrick et al., 1993); the low reported prevalence of this crime among men makes comparisons of its impact very difficult.

Studies of natural disaster victims. Reports of PTSD rates following disasters vary significantly, ranging from estimates of 4% to 80% of exposed individuals across studies (see McFarlane & Potts, 1999 for a comprehensive review). Disasters cover a broad

range of experiences and, unlike the individually experienced events described in the previous section, tend to be experienced collectively. Norris, Foley, and Weisshaar (in press) pointed out that the stressors associated with disasters are multi-faceted. Many disaster victims are exposed to acute stressors such as injury and property loss, and chronic stressors such as relocation and financial strain. Because disasters impact entire communities, victims also experience a variety of vicarious stressors. Although disasters seem to be more random than some other traumatic events, in actuality their victims tend to be disproportionately poor, of low education, and ethnic minorities who live in areas more at-risk and in more vulnerable homes (Norris et al, in press).

Distinctions often are made between natural disasters (e.g., earthquakes, floods) and human-made disasters (e.g., technological events such as nuclear accidents or explosions). It is suggested in the DSM-IV and is often assumed that stressors of human design may produce particularly severe and long-lasting effects (possibly because they are less easily understood as "acts of God", and involve recognition of human destructiveness). However, a large meta-analysis by Rubonis and Bickman (1991) on the disaster-psychopathology association found significantly higher impairment estimates for natural disasters than for disasters that were at least partly the result of human agency. These authors suggested that the greater possibility of assigning blame in human-caused disasters may function to reduce stress levels. The remainder of this review will focus on findings regarding the effects associated with natural disasters.

Shore, Tatum, and Vollmer (1986) studied individuals exposed to the Mount St. Helens eruption and subsequent flooding. They found that 26.9% of women with high

exposure (defined as major property loss or death of family member or other relative) and 13% of men with high exposure were diagnosed as having developed PTSD, generalized anxiety, or single-episode depression over three years following the event.

Madakasira and O'Brien (1987) surveyed the mental health status of 116 disaster victims five months after a tornado devastated a rural community in North Carolina. They found that 59% of victims met the DSM-III criteria for PTSD. No statistically significant effects for sex or any other demographic characteristics were obtained.

Steinglass and Gerrity (1990) conducted a longitudinal study of adults in two communities exposed to natural disasters: a tornado in Pennsylvania (PA) and a flood in West Virginia (WV). In both cases, participants had been forced to leave their homes either temporarily or permanently because of the degree of damage caused by the disaster. Using Horowitz's Impact of Events Scale (IES), these authors found that 76% of the PA sample and 49% of the WV sample had high symptom levels four months post-disaster; these rates dropped to 41% and 24% respectively at 16-months post-disaster. In terms of DSM-III diagnosis, 14.5% of the WV group had diagnosable PTSD at four months post-disaster, but this rate diminished to 4.5% at 16-month follow-up. For the PA group, the 16-month incidence was 21% (no diagnostic data were available at four months for this sample). Steinglass and Gerrity (1990) found substantial gender differences in both short- and long-term PTSD response rates, with women reporting much more distress than men. In terms of diagnosable PTSD at 16-month follow-up, 7 of 8 PA cases were women, as were 8 of 11 WV cases.

Bravo, Rubio-Stipec, Canino, Woodbury, and Ribera (1990) examined the psychological sequelae of exposure to flooding and mudslides in Puerto Rico in 1985. They found slightly higher levels of new depressive, somatic, and posttraumatic stress symptoms in a two-year span following the event when retrospectively assessed. The higher the level of disaster stress, the greater the individual's symptomatic response. These relations did not reach statistical significance when prospectively assessed, although the findings were in the expected direction. Only 4% of those exposed met criteria for PTSD two years after the event. Bravo et al. (1990) found no differential vulnerability to disaster stress based on gender or other sociodemographic variables. However, there was some indication that alcohol symptoms were more prevalent among males and somatic symptoms were more prevalent among women.

Green et al. (1990) described a fourteen-year follow-up study of adult survivors of the Buffalo Creek dam collapse. They found that 44% of their sample had PTSD in 1974 (these diagnoses were made retrospectively in line with DSM-III/DSM-III-R criteria, based on documented symptoms). The rate of disaster-related PTSD in 1986 had decreased to 28%. Those who continued to have PTSD in 1986 were rated as having had more extreme and prolonged life-threatening experiences and loss of closer family members, compared with their non-PTSD and recovered PTSD counterparts. Eleven percent of the sample developed delayed PTSD; race was identified as a risk factor in this regard with African American participants more likely to experience a delayed response. Green et al. (1990) found that women initially scored higher than men on most measures

of disaster-related psychopathology, but by 1986 scores for the two genders were nearly identical.

Anderson and Manuel (1994) explored gender differences in stress responses 24 hours after the Loma Prieta earthquake in Northern California. They found that women reported more severe stress symptoms as indicated by significantly higher scores on two self-report measures, the IES and the Symptom Checklist-90R. They suggested that these results may be explained by greater social acceptance for women to express emotions, particularly stress-related emotions.

McMillen, North and Smith (2000) studied the incidence and comorbidity of PTSD among survivors of an earthquake in Northridge, California. They found that 13% of the sample met full PTSD criteria three months post-disaster, and that 48% met both the re-experiencing and arousal criteria, without meeting the avoidance and numbing symptom criterion. Significantly more women than men met criteria for PTSD. Women were significantly more likely than men to meet Criterion C (three avoidance or numbing symptoms), Criterion D (two hyperarousal symptoms) and Criterion E (disturbance of at least one month's duration).

The studies reviewed above indicate a positive association between exposure to natural disasters and the development of PTSD and other psychopathology. Both this review and other sources (e.g. Rubonis & Bickman, 1991) indicate that the occurrence of these disorders and symptoms diminishes as time since the disaster increases, and that disaster characteristics such as many human casualties, and more extreme and prolonged life-threatening experiences, are associated with worse outcomes. Many natural disaster

studies have found sex differences in PTSD and other psychopathology; however, these findings appear to be less consistent than the results of studies focusing on criminal victimization. In studies noting gender differences, they were always in the direction of women being more symptomatic. In a review of the literature regarding posttraumatic stress responses among disaster victims, Green and Lindy (1994) concluded that women and men are about equally at risk for symptoms following disaster, but that they may present with different complaints. Specifically, these authors stated that women tend to report more PTSD, anxiety, and depression symptoms, whereas men are more likely to abuse alcohol, have physical or somatic complaints, or have symptoms associated with hostility or acting out.

Methodological considerations. From the above review, it should be clear that there is wide variation in prevalence estimates of PTSD, even within studies of similar type. A number of methodological factors may account for these differences; these will be briefly identified before proceeding. Firstly, studies vary in terms of the measures used for assessing PTSD. Acierno et al. (1999) noted that prevalence estimates for PTSD are inextricably linked to the effectiveness with which surveys detect victimization, because if a traumatic event is not identified, PTSD will not be evaluated. Another problem that Acierno et al (1999) identified in assessing PTSD prevalence is the requirement that the respondent link his or her symptoms to a traumatic event, as this assumes a level of insight that may be lacking or purposefully denied. Within the general population epidemiological studies reviewed above, most investigators have utilized a version of the Diagnostic Interview Schedule (DIS) with some modifications. Studies of victims of

crime and natural disaster display considerably more variability in terms of measures used than do the general population studies. Although modifications of the DIS or other similar structured interview approaches are not infrequently used in disaster studies, self-report measures such the Impact of Events Scale (e.g., Steinglass & Gerrity, 1990) and the Symptom Checklist-90 (e.g. Anderson & Manuel, 1994) are frequently employed either alone or in combination with interviews. On the whole, self-report inventories are likely to produce dimensional ratings of symptoms, and their items and scales often do not correspond precisely with diagnostic criteria. In contrast, structured interview approaches generally allow for categorical as well as dimensional ratings of symptoms and disorders, and they tend to be based on the symptoms and criteria described in the DSM. Structured interviews are also more likely to elicit information about the recency, onset, and duration of the symptoms (Solomon, Keane, Newman & Kaloupek, 1996). Such differences in assessing posttraumatic symptomatology make comparisons between studies using different measurement approaches difficult.

A second important methodological factor that may account for different prevalence rates across studies is the timing of the assessment after the traumatic event. Riggs et al. (1995), in a longitudinal study of PTSD in non-sexual assault survivors reviewed earlier, aptly illustrated this point. Rates of PTSD for both men and women decreased dramatically between one month and four months post-assault. Similarly Green et al. (1990) reported significant reductions and changes over time in the symptomatology of Buffalo Creek survivors. The majority of studies reviewed above, however, are cross-sectional, with wide variation in the timing of assessment post-

trauma. This factor complicates evaluating comparability among studies. A further time-related issue identified by Resnick and Kilpatrick (1998) concerns whether investigators utilized the DSM-IV criterion of one month's duration for PTSD symptoms; they noted that prevalence rates for PTSD secondary to criminal victimization vary substantially across studies depending on whether this time requirement is applied.

Sampling is yet another important factor that may result in varying PTSD prevalence estimates. McFarlane and Potts (1999) noted that within traumatized populations, there is significant variation in levels of exposure and intensity of threat experience. The prevalence of PTSD found in any disaster study is dependent on the level of exposure required before the subject can be included, given that subjects with high levels of exposure are likely to have higher prevalence estimates. Similarly, rates of PTSD in community-based samples are likely to be lower than in clinical or in specially-referred samples (Resnick & Kilpatrick, 1998). Furthermore, as has been noted above, different types of crimes and disasters produce different prevalence rates, further complicating cross-study comparisons.

Summary of epidemiological findings. Regardless of variations in PTSD prevalence estimates across studies, this review of the epidemiological literature has indicated that rates of trauma are high in the general population, with certain traumatic events producing more widespread and enduring effects than others. Studies of specific trauma populations such as victims of criminal attack and of natural disasters consistently indicate substantial risk for PTSD and other trauma-related psychopathology. Heightened risk is associated with factors related to both objective and subjective evaluation of

trauma severity. It should be noted, however, that even among victims of severe and prolonged trauma, a significant proportion of exposed individuals (generally the majority) do not develop PTSD or other psychopathology. This observation has led researchers to question the original assumption that PTSD represents a normal process of adaptation to an abnormal stressor. Shalev (1996) indicated that recent literature does not bear out the assumption that experiencing trauma invariably results in psychopathology or that PTSD occurs only after extraordinary events. Instead, responses may be predicted by a variety of factors including premorbid vulnerability, magnitude of the stressor, preparedness for the event, quality of immediate and short-term responses, and post-event recovery factors.

The literature reviewed above indicates that women are more likely to develop PTSD than men after experiencing comparable traumatic events. In general population studies, this is despite the finding that men report exposure to a greater number of traumatic events. The research on gender differences in the effects of natural disasters is somewhat more equivocal than the findings of criminal victimization studies, although the differences obtained are in the same direction. In the following section, possible explanations for these gender differences will be explored.

Explanations of Sex Differences in PTSD Prevalence

A variety of possible explanations exist for the observed sex differences in PTSD prevalence. Methodological factors include differences in the type and characteristics of traumatic stressors experienced by men and women, differences in preexisting risk factors, differences in reporting styles, and problems and biases associated with PTSD

diagnosis. Social explanations address the interplay of gender with power, resources, privilege, and stratification that has the effect of rendering women more vulnerable to the effects of traumatic events. Biological, psychodynamic and social-cognitive theories have also been invoked to explain this phenomenon.

Methodological Explanations

Trauma types and characteristics. The types of trauma to which men and women are exposed may differ considerably. As was noted in studies cited above (e.g., Breslau et al., 1991; Kessler et al., 1995; Norris, 1992) women are at higher risk for experiencing traumas such as rape and sexual assault, whereas men are at greater risk of events such as physical assault, involvement in motor vehicle accidents, combat exposure, or witnessing acts of violence. The literature already reviewed also suggests that different types of trauma are associated with different rates of PTSD; for example, rape and physical assault have been associated with high levels of symptoms whereas lower rates have been observed for some natural disasters and robbery. Kessler et al. (1995) found that women were significantly more likely than men to experience a trauma associated with a high probability of PTSD. They found that 44.6% of men with a lifetime trauma reported that their most upsetting trauma was one of those associated with a high probability of PTSD among men (i.e., rape, combat exposure, childhood neglect, or physical abuse), whereas 67.6% of women with lifetime trauma reported that their most distressing trauma was one of those associated with a high probability of PTSD among women (i.e., rape, sexual molestation, physical attack, being threatened with a weapon, or childhood physical

abuse). Freedy et al. (1994) also found that women were over-represented among crime types typically associated with a high risk of developing PTSD.

Other characteristics of the trauma experienced by women may also account for the differences in impact. For example, in regard to physical and sexual assault, women are more likely to be attacked by known individuals such as husbands and ex-husbands, boyfriends, relatives or acquaintances rather than strangers (Acierno et al., 1999; Kilpatrick et al., 1993). Relationship to the perpetrator has been identified as a one of the mediating factors of responses to childhood sexual abuse, with evidence indicating that incestuous abuse by a father or stepfather is experienced as more traumatic and is associated with greater long-term psychological harm than abuse by other family members or by outsiders (Beitchman et al., 1992). The trauma types that produce high rates of PTSD among women may also occur at an early age. Kilpatrick et al. (1993) in the National Women's Study found that almost one-third (29.3%) of rape cases occurred before age 11, and approximately two-thirds occurred before the age of 18. Breslau et al. (1997) found that the sex difference in PTSD was markedly greater if exposure occurred in childhood than after the age of 15 years. They found that a higher proportion of women than men reported childhood exposure to rape, assault, or ongoing physical or sexual abuse, whereas a higher proportion of men with childhood exposure reported serious accidents or injury (traumatic events that did not lead to high rates of PTSD in participants of either sex). However, it should be noted that the effects of exposure to rape, assault and abuse differed by sex, yielding a high rate of early PTSD in women (63%) but no PTSD cases in men. Reported PTSD rates were also significantly higher for

women with childhood traumas involving news of sudden death or illness, or witnessing violence (39.1% vs. 4.5%). In a large meta-analysis of risk factors for PTSD, Brewin, Andrews, and Valentine (2000) found that studies that included PTSD arising from childhood trauma had a stronger effect size for gender than studies with an exclusive focus on adult trauma. The types of trauma frequently experienced by women (such as childhood abuse or domestic violence) may be more chronic in terms of their duration, a factor that has not been directly considered in most studies.

A number of studies have indicated that rates of PTSD are positively associated with physical injury and perceived life threat (Acierno et al., 1999; Kilpatrick & Resnick, 1998). Indeed, one study (Kilpatrick et al., 1989) found that rates of PTSD more than doubled if either characteristic was reported, and were four times greater if both characteristics were present. Kilpatrick et al. (1993) found that perceived life threat was experienced by about 75% of aggravated assault victims and 58.5% of rape victims. Serious physical injury was reported by around 29% of assault victims and 10% of rape victims. It is possible that women experience the characteristics of physical injury and perceived life threat more frequently than men, both because of the types of events they are likely to experience and due to a greater disparity in physical strength between a female victim and male attacker, and that these factors may help to explain the gender difference in PTSD prevalence.

Some studies (e.g., Breslau et al., 1999; Kessler et al., 1995) have controlled statistically for different rates and types of trauma among men and women and have still identified significant sex differences. For example, in addition to excluding the effects of

sexual trauma, Stein et al (2000) adjusted for gender differences in the number of lifetime traumas and the likelihood of the trauma being associated with particular reactions to or consequences of the event (i.e., thinking that one would be killed or seriously injured, sustaining a serious physical injury, or seeing someone else seriously injured or killed). These adjustments did not account for the gender difference; women were still more likely to develop PTSD. However, as has been noted by Saxe and Wolfe (1999), most epidemiological studies have not gathered important details about the traumatic event. For example, age at which the trauma occurred, whether the event was episodic or chronic, and the severity of exposure might influence the gender-psychopathology relation.

Pre-existing risk factors. Another possible explanation for the sex difference in PTSD rates is that men and women differ in terms of pre-existing risk factors. For example, prior victimization has been identified as a risk factor both for later victimization and elevated PTSD risk upon experience of future trauma (Acierno et al., 1999). Kilpatrick et al. (1993) found a significant association between number of prior rapes/assaults and exposure to new assaults. The risk of new victimization increased with prior exposure to one or two assault incidents, and jumped substantially with a history of three or more assaults. Among those who experienced recent assault, the group with no prior history of assaults had a significantly lower rate of current PTSD (3.6%) than the group with a history of one prior incident (8.9%), the group with two prior incidents (10.7%), or the group with three prior assaults (28.5%). Given child abuse statistics, women would appear to be at greater risk for prior victimization (Kessler et al., 1995).

However, Breslau et al. (1997) found that higher risk of PTSD in women was not accounted for by a history of multiple traumatic events. They looked at the extent to which sex differences in PTSD may be explained by other pre-existing risk factors in a large community sample of young adults. They found that pre-existing anxiety or major depressive disorders played a small part in the observed sex difference in PTSD; this appeared to be a function of the higher rate of these pre-existing disorders for women than for men. A family history of anxiety disorder and early separation from parents were significant risk factors for PTSD in both male and female participants and thus could not account for the sex differences in PTSD.

Reporting styles. Saxe and Wolfe (1999) pointed out that men and women have different reporting styles, and that these differences may affect the degree to which they disclose experiences of traumatic events and symptoms of PTSD. Specifically, women appear to report more symptoms of physical illness and emotional distress than men. Women also tend to report a greater severity of symptoms. These findings may reflect real differences in the experience of symptoms; however, they could also indicate that women tend to over-report or that men tend to under-report symptoms, affecting estimates of PTSD prevalence. As yet, there are no data available to support or refute this possibility with trauma victims. The hypothesis that men are less willing to acknowledge and report depressive symptoms has been advanced as an explanation for gender differences in the prevalence of depression, although this notion has not been consistently supported (Nolen-Hoeksema, 1987).

Biases and problems associated with PTSD diagnosis. Since the famous study on gender stereotypes and perceptions of mental health by Broverman, Broverman, Clarkson, Rosenkrantz, and Vogel (1970), studies of other disorders have indicated that there may be gender biases inherent in diagnosis. For example, Rienzi and Scrams (1991) found that when provided with descriptions of six people of unidentified sex with DSM-III-R personality disorders, university students characterized individuals with paranoid, antisocial, and compulsive personality disorders as males, and they characterized individuals with histrionic and dependent personality disorders as female. Only the description of schizoid personality disorder was not gender-typed.

It is possible that men and women differ in their symptomatic responses to trauma and that the PTSD diagnosis more accurately reflects the symptoms experienced by female than by male trauma victims. This seems unlikely, however, given that the diagnostic criteria were significantly shaped by the posttraumatic responses observed among (mainly male) Vietnam and other war veterans.

A particular problem that has been noted with the DSM-IV PTSD diagnostic criteria across studies is that the smallest percentage of individuals meet the criterion of three avoidance symptoms as compared with the criteria of one re-experiencing symptom and two hyperarousal symptoms. It has been observed that if the requirement for this criterion is dropped from three to two symptoms, rates of PTSD rise substantially (Kilpatrick & Resnick, 1998). Riggs et al. (1995) found that more than 50% of non-PTSD assault victims met re-experiencing and increased arousal criteria; only 6% of female victims and none of the male victims had sufficient symptoms to meet avoidance and

numbing criterion. Breslau et al. (1999) found that women exposed to assaultive violence were significantly more likely than their male counterparts to report symptoms of avoidance and numbing, which largely accounts for their greater risk of meeting criteria PTSD diagnosis following events in this category. A very similar observation was also made by Norris (1992). Interestingly, in their meta-analysis of risk factors for PTSD, Brewin et al. (2000) found that the effect for gender was no longer significant when continuous as opposed to dichotomous measures of PTSD were used. This study also found a greater effect size for gender in studies that assessed symptoms through interviews as opposed to questionnaires.

Social Explanations

Studies of the mental health effects of disasters have been fairly criticized for their emphasis on individual factors in explaining vulnerability, and their tendency to ignore social structural explanations. It has also been argued that such studies tend to condense the complexity of gender into a binary characteristic, without differentiation in terms of class, culture or experience (Bolin, Jackson & Crist, 1998). Consideration of the sociological literature regarding the gendered nature of disaster experiences adds another dimension to the discussion of gender differences in posttraumatic responses, and may be extended to an understanding of how other types of trauma may be experienced differently by men and women. As is pointed out by Enarson and Morrow (1998a), vulnerabilities to disaster are not equally distributed, but like other life chances, they are shaped by overarching and interacting social structures of class, race and ethnicity, age, physical ability, and gender. Disasters unfold in highly gendered social systems, where

risk factors are embedded in conditions of everyday life including gender differences in socioeconomic status, domestic responsibilities and power, access to and control over resources (Enarson & Morrow, 1998b).

Women are disproportionately represented among the poor; people living in poverty face greater exposure and risk to environmental hazards due to factors such as construction material, housing location, and access to information. The poor are also likely to have less insurance, less savings, and thus less likelihood of full long-term material recovery (Fothergill, 1998). Given their greater longevity, women are increasingly represented among the aged population. As they are also more likely to be poor, there are significant numbers of single or widowed elderly women without the physical or economic resources to deal with disasters effectively on their own (Morrow & Phillips, 1999). Elderly individuals may also be at heightened risk at times of disaster due to health difficulties and limitations in mobility (Ollenburger & Tobin, 1998)

Women's care-taking roles may contribute substantially to their greater vulnerability at times of disaster. Women bear disproportionate responsibility for raising children, caring for the sick, disabled, and elderly, and meeting the family's daily needs. As a result of their extensive involvement in and strong identification with the domestic environment, many women are profoundly affected when their homes and neighborhoods are damaged or destroyed (Morrow & Phillips, 1999). Furthermore, women's paid and unpaid care-giving responsibilities position them to sustain the family and community emotionally and materially throughout the experience of disaster and recovery. The gendered division of labor makes many women both frontline responders in times of

crisis, and long-term caregivers to family members impacted by disaster. Women's care-giving roles thus expand significantly during and after a disaster (Enarson & Morrow, 1998), and the burdens of care-giving may contribute to women's stress, fatigue, and overall decline in emotional well being during disasters (Fothergill, 1998).

Additionally, women may have less power and autonomy within households to make decisions about disaster preparation and evacuation, and to access post-disaster resources (Morrow & Phillips, 1999). Women are largely absent in more formal emergency planning and preparedness organizations (Fothergill, 1998). In the aftermath of disaster, women may feel at greater risk of sexual violence, with disrupted neighborhoods and living arrangements (Enarson & Morrow, 1998a). Several studies also show increased rates of domestic violence in the aftermath of a disaster (Fothergill, 1998). Women's economic vulnerability may render them particularly dependent upon disaster relief programs; however, power differentials of gender, age, marital status, and family structure, as well access to transportation and freedom from dependent care, ultimately affect who is able to access and benefit from these programs (Enarson & Morrow, 1998a).

Ollenburger and Tobin (1998) surveyed flood victims in Texas, Iowa and Missouri in an effort to understand the individual and community characteristics influencing the long-term impacts of hazardous events. They found women's greater vulnerability to post-disaster stress to be the result of "a complex web of factors, including the presence of children, marital status, the structure of the family unit, age, socioeconomic status, health and the level of social involvement" (p. 106). These factors

were found to interact in various ways to increase the vulnerability of certain groups such as single or divorced women heading households, women in poor health, and older women living alone.

This literature highlights the dimensions of women's lives that may render them particularly vulnerable to adverse mental health effects in the event of a disaster. However, this analysis may be easily extended to an explanation of women's greater vulnerability following other traumatic events, such as criminal violence. For example, women living in poor neighborhoods may be particularly vulnerable to criminal violence and may have less access to victim support services. Similarly, victimized women may have to deal with their posttraumatic responses in the context of caring for small children or elderly parents, leading to depletion of their coping resources. Although the impact of age and race (and their interaction with gender) are considered fairly frequently in prevalence studies of trauma and PTSD, such studies rarely include an analysis of the impact of variables such as socioeconomic status and care-giving responsibilities.

Theoretical Explanations

Saxe and Wolfe (1999) explored three theoretical perspectives on the relation between gender and PTSD. The perspectives vary in terms of the explanatory role attributed to individual and social factors, respectively. These include biological perspectives, psychodynamic/feminist perspectives and social-cognitive perspectives. These explanations are all hypothetical, having received virtually no direct study.

Biological perspectives. Biological perspectives focus on structural and physiological differences between men and women in order to speculate whether these

differences may relate to differences in outcome (Saxe & Wolfe, 1999). Hypothesized mechanisms include sex differences in vulnerability to hippocampal damage, hemispheric lateralization, norepinephrine function, hypothalamic-pituitary-adrenal (HPA) axis activity, and behavioral sensitization. Saxe and Wolfe (1999) note that these possible explanations remain unconfirmed as almost all biological studies of PTSD have been conducted with male participants and none have directly compared males and females.

Psychodynamic/feminist theories. Saxe and Wolfe (1999) refer to "self-in-relation" theory based on the contributions of Baker Miller (1986), Chodorow (1978) and Gilligan (1982) among others that accords special status to relationships for women. Specifically, such theories propose that a woman's sense of self is closely related to her relationships with others and particularly to reciprocal caring in relationships. Saxe and Wolfe (1999) propose that according to this perspective, women may be more vulnerable to traumatic events involving an interpersonal component because relationships are closely tied to identity and sense of self. As has been noted above, women are most likely to experience sexual trauma and trauma perpetrated by a known person. From this perspective, these traumas are precisely the types of events with which women may have most difficulty coping. A need to preserve relationships may also render women more reluctant to disclose certain types of trauma and more likely to engage in self-blame.

Social-cognitive perspectives. Social-cognitive theories emphasize the social category of gender as a central organizing construct by which individuals develop a self-concept. This self-concept is strongly influenced by the social meanings of being male or female in a given environment (Ashmore, 1990). From this perspective, the social

category of gender can have a powerful effect on the thoughts, feelings and beliefs of traumatized individuals. Saxe and Wolfe (1999) pointed out that one can surmise the differential impact of trauma on men and women by understanding how meanings of the traumatic event relate to the shared meanings of being a man or woman in a given social environment. The experience of trauma and victimization frequently generates feelings of passivity, helplessness, and powerlessness that are particularly incongruent with the social construction of the stereotypic masculine role of activity, aggression and control that exists in most cultures. Saxe and Wolfe (1999) refer to Festinger's (1957) idea that cognitive dissonance is distressing and that individuals will alter their thoughts or behavior in order to reduce the experience of dissonance. Men may thus experience a dissonance between gender-related cognitions and trauma-related cognitions that is not experienced by most females. This dissonance may motivate them to minimize the impact of the trauma, thereby contributing to different assessed PTSD prevalence rates between men and women. Saxe and Wolfe (1999) note that clinicians and researchers may also falsely elevate estimations of PTSD prevalence rates in women because of shared social biases.

The methodological and theoretical explanations for the sex differences in PTSD rates described above refer, to varying extents, to the impact of shared social/cultural beliefs about gender-appropriate behavior and responses to trauma. Only one study has attempted to evaluate empirically the impact of culturally-based gender beliefs on responses to trauma. Norris, Perilla, Ibanez and Murphy (2001) hypothesized that if gender differences in PTSD stem from culturally-defined roles and rules, they should be

greater in societies that foster traditional views of masculinity and femininity than in societies that adhere to these traditions less rigidly. They collected data on PTSD six months after Hurricane Paulina in Mexico and Hurricane Andrew in the US. They found significant sex by cultural group interactions for the total scale of the Revised Civilian Mississippi Scale and for the subscales of Intrusion, Avoidance/Numbing, and Remorse. The differences between Mexican men and women were greater than the differences between American men and women. Sex differences in PTSD were weakest for African-American participants, which the authors attributed to less gender-typing with regard to social and family roles within this cultural group. As the authors noted, comparisons of victims of different disasters can be problematic as it difficult to establish equivalence. It is also possible that differences between US and Mexican society other than sex roles may account for the results. However, this study represents an innovative attempt to explore a potential source of the observed sex differences in PTSD. The next section reviews some of the literature regarding cultural values of masculinity and femininity and their potential impact on the individual's cognition.

Gender in Social Cognition

In the literature pertaining to the psychology of gender, the term "sex" is frequently used to denote the large and diverse set of biological and genetic/evolutionary factors that contribute to the ways in which men and women think, feel, and behave differently. The term "gender" is used to acknowledge that masculinity and femininity are cultural constructions, and that each person is brought up in a particular society with a rich set of beliefs and expectations about these social categories (Ashmore, 1990). This

section begins with an overview of the various components of the gender belief system, and then focuses on the specific contributions of Bem's sex role theory. The relationship of gender to normal and disordered emotional functioning is then explored.

The Gender Belief System

Deaux and LaFrance's (1998) concept of the "gender belief system" provides a comprehensive description of the multifaceted, all-encompassing set of ideas that people have about gender. Separate but interrelated components of this system include stereotypes about the characteristics of men and women, attitudes that people hold about the social roles occupied by men and women, and the views that men and women have about their own gender identity. Deaux and La France (1998) argued that stereotypes appear to be the most fundamental aspect of the gender belief system, both in terms of their durability over time and their pervasive influence on other elements of the system. Gender stereotypes may be defined as the structured set of beliefs about the personal attributes of men and women (Ashmore, Del Boca, & Wohlers, 1986). The scope of gender stereotypes includes beliefs about physical characteristics, personality traits, role-related behaviors, occupational preferences, specific competencies and emotional dispositions (Deaux & LaFrance, 1998). In addition to their descriptive nature, gender stereotypes also have a prescriptive component, indicating which behaviors are deemed suitable for men and women respectively (Fiske & Stevens, 1993).

Eagly and Wood (1991) indicated that factor analytic studies have shown that the content of most gender stereotypes can be generally summarized in terms of differences on two dimensions, the communal and the agentic. Women are expected to possess high

levels of communal attributes, including being friendly, unselfish, concerned with others, and emotionally expressive. Men are expected to possess high levels of agentic qualities, such as being independent, masterful, assertive, and instrumentally competent. Such gender role expectations arise from the distribution of women and men into different specific social roles, especially family and occupational roles. The distinctive communal content of the female gender role is assumed to arise from the domestic and child-rearing role and from occupational roles filled disproportionately by women (e.g., teaching, nursing). The distinctive agentic concept of the male stereotype is believed to derive from men's typical roles in society and the economy. It would appear that the content of gender stereotypes has changed little in the face of significant and relevant alterations in societal arrangements (e.g., the rise of the feminist movement, increased labor-force participation by women). Nonetheless, there has been considerable change regarding evaluation of stereotypes. Whereas female stereotypic characteristics were previously rated as less desirable, there has been a tendency over time to reverse this pattern or to rate male and female stereotypic characteristics equally favorably (Ashmore, Del Boca, & Wohlers, 1986; Ruble, 1983).

Attitudes regarding sex roles is the second component of Deaux and LaFrance's (1998) gender belief system. They suggested that attitudes about appropriate roles and responsibilities for men and women have shown greater flexibility over time than stereotypes, with major shifts between the mid-1960s and mid-1970s. Over time, men and women in the US have become increasingly liberal in their views of the roles and rights of women, with women generally showing more egalitarian attitudes than men

(Spence, Deaux, & Helmreich, 1985; Spence & Hahn, 1997). Studies regarding attitudes toward men's roles are few. England (1992) found that undergraduate students expect men to take the financial provider role and family responsibilities seriously, and to be assertive. She concluded there have been some changes over time in the male role (more emphasis on familial concerns and interpersonal relations) but also aspects that have remained constant. Thomas (1996) suggested that progress with regard to the diversity of women's roles has superceded change in men's roles.

In addition to descriptions and evaluations of others, the gender belief system also shapes and incorporates assessment of self as male or female and the meanings of these categories within society (Deaux & LaFrance, 1998). Within the first two to three years of life, most children are able to correctly identify themselves and others as male or female. This is followed by the realization that gender is a stable attribute over time, remaining constant despite changes in appearance, clothes, or activity (Smith, 1987). As they mature, children increasingly acquire and incorporate sex-typed beliefs, which will ultimately influence their choice of activities, occupations, sexual relationships, and social networks in important ways (Deaux & LaFrance, 1998). Thus, the internalization of gender roles (and measurement thereof) looms large in understanding individuals' gender belief systems as they might relate to expectations of men and women undergoing trauma.

Sex Roles and their Measurement

Prior to the 1970's, it was assumed that the constructs of masculinity and femininity were polar opposites. Unidimensional tests built on this assumption (often

called M-F tests) scored respondents who fell at one of the two extremes as either masculine or feminine, and those who fell between the two extremes as having a given amount of the single entity M-F. For most researchers, appropriate sex-typing was seen as important for good adjustment and mental health: the masculine male and feminine female were viewed as psychologically advantaged relative to less sex-typed individuals. Influences from three disparate sources converged to produce a revolution in sex-role research in the 1970's. First, a number of authors hypothesized that masculinity and femininity could vary independently; existing measures may be forcing them into an artifactual negative relationship. Second, scattered empirical studies began to challenge the notion that sex-typing was uniformly conducive to mental health. Third, with the growth of the women's movement, an increasing number of feminist writers argued that traditional sex roles, both masculine and feminine, were restrictive and harmful to individual development (Lenney, 1991).

In 1974, Bem published the first sex role test with independent scales of Masculinity and Femininity, the Bem Sex Role Inventory (BSRI). Bem (1974) also introduced the concept of androgyny, referring to a separate category of individuals who have high levels of both masculine and feminine characteristics. Androgyny, rather than masculinity in males and femininity in females, was proposed as the "healthy" ideal, as it allows the individual to match his or her behavior to situational demands (Ashmore, 1990). The publication of the BSRI was very soon followed by the publication of another popular sex role inventory with separate masculinity and femininity scales by Spence, Helmreich, and Stapp (1975): the Personal Attributes Questionnaire (PAQ). Two-

dimensional sex role tests rapidly proliferated, and research with these instruments confirmed that the older M-F tests and the model on which they were based were inadequate (Lenney, 1991). The BSRI remains the most commonly used measure in all areas of gender-related research (Beere, 1990; Lenney, 1991). The concept of sex-typing measured by the BSRI is elaborated in Bem's (1981a) gender schema theory.

Gender schema theory. Bem (1981a) points out that all societies allocate adults' roles on the basis of sex and anticipate this allocation in the socialization of their children. She uses the term "sex-typing" to refer to the process by which society transforms male and female into masculine and feminine, through the expectation that boys and girls acquire sex-specific skills, personality attributes, and self-concepts. Bem (1981a) argues that in addition to learning content-specific information about the particular attributes and behaviors directly or remotely linked with sex, the developing child also learns to invoke this heterogeneous network of sex-related associations (referred to as the "gender schema") to evaluate and assimilate new information. Bem (1981a) uses the term "gender-based schematic processing" to describe a generalized readiness to process information on the basis of the sex-linked associations that make up the gender schema. According to Bem (1981a), gender-based schematic processing leads to sex-typing because the self-concept itself gets assimilated into the gender schema.

> As children learn the contents of society's gender schema, they learn which attributes are to be linked to their own sex and, hence, with themselves…Simultaneously, the child also learns to evaluate his or her adequacy as a person in terms of the gender schema, to match his or her preferences,

attitudes, behaviors and personal attributes against the prototypes stored within it (p. 355).

Bem (1981a) argued that the incorporation of self-esteem into the gender schema provides an internalized motivational factor that prompts the individual to regulate his or her behavior so that it conforms to social norms regarding masculinity and femininity. Bem (1974; 1981) proposed the BSRI as an appropriate measure of sex-typing. Individuals who score above the median on the sex-congruent scale and below the median on the sex-incongruent scale are defined as sex-typed, whereas those who show the reverse pattern are designated as cross-sex-typed. Individuals who score above the median on both scales are defined as androgynous, and those who score below the median on both scales are designated as undifferentiated. Bem (1981a) and others (e.g., Frable, 1989) have conducted studies indicating that sex-typed individuals have a greater tendency to process information (including information about the self) in terms of the gender schema.

Although the BSRI is widely used, Bem's theoretical claims are not uncontested. Particular issues of debate concern whether gender-related phenomenon are best conceptualized as unifactorial (based on sex-typing) or multifactorial, whether scales such as the BSRI and PAQ actually measure the more specific domains of instrumentality and expressiveness rather than masculinity and femininity (see Spence, 1993 for an alternative position on these issues), and whether androgyny is indeed associated with better psychological health and well-being (see, for example, Whitley, 1985).

Emotional behavior is an important content area of gender stereotypes. Furthermore, the effects of sex-typing on emotional functioning have been repeatedly demonstrated. As shall be seen in the following review, both normal and disordered emotion are subject to sex-typing influences.

Gender and Emotion

Gender-emotion stereotyping. A number of research reviews (e.g. Brody, 1985; Brody & Hall, 1993; Fischer, 1993) indicate that people have clearly-held stereotypes regarding greater female emotionality and expressivity. Beliefs about the types, quality, and intensity of emotions are associated with each sex. Sadness, fear, and happiness would appear to be regarded as emotions most frequently experienced and expressed by women; anger is regarded as a stereotypically male emotion. There is evidence that these stereotypes about sex differences in emotionality are employed by children as young as preschool age, who have been found to make attributions about a target's gender based on the inferred emotional state (Birnbaum, Nosanchuk, & Croll, 1980), and to perceive different emotions based on a target's age and sex (Karbon, Fabes, Carlo, & Martin, 1992).

Mental health professionals also engage in gender-emotion stereotyping, as was shown in the classic Broverman et al. (1970) study. They found that the clinical judgements made by psychiatrists, psychologists and social workers about the characteristics of healthy individuals differed as a function of the sex of the person judged. These differences paralleled stereotypic sex-roles. They also found that participants' view of the ideal healthy generic adult corresponded closely with their view

of the healthy male, but differed significantly from their perception of the healthy female. In a more recent replication involving mainly female nursing students, Beckwith (1993) found that images of the healthy male, healthy female and healthy generic adult were similar and that gender differences that did occur generally involved stereotypes unflattering to males. Heesacker et al. (1999) explored gender-based emotional stereotypes held by college students and counselors. They found that participants consistently stereotyped men as hypoemotional, and that adherence to such stereotypes may have an impact on counseling-relevant judgements.

Brody (1997) pointed out that gender-emotion stereotypes regarding emotional expression tend to be inaccurate on a number of counts. First, they fail to acknowledge situational, cultural and individual variations in emotional expressiveness. They tend to generalize across emotional intensity and frequency, as well as across different modalities of emotional expression (e.g., verbal and behavioral). They also tend to exaggerate gender differences in emotional expression. Moreover, Brody (1997) noted that stereotypes often lead to the erroneous assumption that gender differences in emotional expression are biological (and therefore largely immutable). Nevertheless, such stereotypes can exert a powerful influence on actual emotional behavior. Due to their prescriptive nature, gender stereotypes can function as self-fulfilling prophecies. One way in which gender-emotion stereotypes may contribute to actual gender differences in emotional expression is via the operation of “display rules”. Display rules are cultural standards about the quality and intensity of emotions that can be expressed in different contexts (Brody, 1985). Fischer (1993) described the content of these cultural rules of

emotional expression as follows: men should hide or control their emotions, whereas women are allowed or encouraged to show their feelings. Men and women may receive reinforcement or censure for displaying particular types of emotions. For example, women may learn to expect negative social reactions to expressions of anger, an emotion that men may be rewarded for expressing. They may receive more support from others when they express fear or sadness, whereas men may feel rejected or humiliated for showing such feelings. Brody (1985) points out that as children develop, they increasingly understand that emotional experience and expression do not always correspond. Polce-Lynch, Myers, Kilmartin, Forssmann-Falck, and Kliewer (1998) examined gender and age patterns in emotional expression. They found that boys restrict emotional expression from early adolescence through late adolescence, whereas girls increase emotional expression through the same age period. This pattern thus follows the socially prescribed gender-specific "display rules".

Gender differences in emotional functioning. What does research tell us about real gender differences and similarities in emotional functioning? As has been noted by Fischer (1993) and others, it is difficult to draw general conclusions. Emotions are multifaceted phenomena with experiential, cognitive, physiological, and expressive components; thus their relation to gender is complicated. Brody and Hall (1993) reviewed studies regarding gender differences in emotional functioning and summarized the findings as follows: congruent with emotion-stereotypes, females do tend to be more intensely expressive of both positive and some negative emotions (e.g. sadness, fear) than males. Women report themselves to experience a wider variety of emotions than do men,

and they tend to be better than men at recognizing and decoding affective expressions in others from nonverbal cues. In some contexts, females have been found to be relatively weaker than males in both recognizing and expressing anger and other outer-directed emotions (e.g., contempt). Males have been found to report more pride in the self than women, and fewer intropunitive affects such as shame, guilt, embarrassment, or anxiety. Brody and Hall (1993) pointed out that the data on greater female expressivity are more convincing for intensity than for frequency of emotion. The findings are stronger for expression than for experience of emotion, although the two are often difficult to separate. They also caution that these effects may be situationally and culturally specific.

The literature reviewed above has focussed on normal emotional functioning; there may also be some gender differences in the rates and expression of emotional disorders. For example, women are diagnosed as having a depressive disorder at least twice as frequently as are men; with few exceptions, women report more depressive symptoms than men in most geographic areas of the world. Interestingly, the populations in which sex differences in depression have not been consistently found include groups characterized by non-typical social arrangements such as university students, the bereaved, the elderly, the Old Order Amish, and members of some rural, non-modern cultures (Nolen-Hoeksema, 1987). Differences between men and women have also been noted in the types of depressive symptoms expressed (Frank, Carpenter, & Kupfer, 1988; Oliver & Toner, 1990). Similarly, significantly more women than men are diagnosed with anxiety disorders such as panic disorder, social and specific phobias, and generalized anxiety disorder (Beidel & Turner, 1997). Some writers have attributed these

sex differences in diagnosed psychopathology directly to the social roles that men and women occupy (eg. Gove & Tudor, 1973), whereas others have focussed on factors such as gender differences in coping behaviors (Nolen-Hoeksema, 1987) and help seeking (Kessler, Brown & Broman, 1981). The incompatibility of depressive symptoms with the stoic and agentic components of the traditional male role, and different social consequences for men and women exhibiting depressed affect and symptomatology have also been cited as factors contributing to gender differences in this disorder (Hammen & Peters, 1977; Oliver & Toner, 1990). Vredenburg, Krames, and Flett (1986) found that depressed male psychiatric patients characteristically reported symptoms relevant to the male sex role (work problems, a general lack of enjoyment or satisfaction, a concern with their physical health, and thoughts of committing suicide). Symptoms characteristic of female patients, however, were much more consonant with stereotypic views of women (frequent crying, a dislike of self, concerns with appearing old and unattractive, and feelings of tiredness and irritability). Thus, whether it is a "cause" or an "effect" of gender stereotypes, males and females do appear to differ in emotional functioning.

Gender roles and emotional functioning. Fischer (1993) has suggested that it is not so much sex but gender identity and related roles that determine how often people experience and express particular emotions. Similarly, Brody (1997) proposed that various factors serve as "proxies" for gender in determining sex differences in emotion and emotional expression: these include differing social role expectations, differing socialization histories for males and females, cultural values, and power and status imbalances between the two sexes. This position has received some support from studies

indicating that men and women with atypical gender roles display patterns of emotional expressivity opposite to those expected based on their biological sex. A number of researchers have also explored this question more directly. Kring and Gordon (1998) found that gender-role characteristics moderate the relation between sex and expressivity. They hypothesized that androgynous individuals would be more expressive than either feminine or masculine individuals as they should be less constrained by notions of social appropriateness or display rules. They found that androgynous participants, regardless of sex, were more facially expressive while watching emotional film clips and also reported greater dispositional expressivity than did masculine or feminine participants. Pidano and Tennen (1985) assessed the role of gender and sex-role orientation (identified using the BSRI) as mediators of transient depressive experiences. They found that for each gender, the nature of the depressive experiences endorsed by participants was significantly influenced by their sex-role orientation. For males, the most striking differences based on sex-role orientation were found with regard to experiences related to the traditionally feminine areas of dependence and love relationships: masculine males were less dependent than any other group and were less depressed by the other-initiated break-up of a relationship than androgynous or undifferentiated males. For females, the largest variation based on sex-role orientation was found in regard to depressive experiences involving the stereotypically masculine concerns of control, activity and efficacy. Androgynous females, more than any other group, had the capacity to deal directly and actively with depression, without withdrawing or trying to ignore the experience. They concluded that although gender alone provides some information about the depressive

experience, sex-role orientation is a more potent predictor of the components of normal depression. Oliver and Toner (1990) explored the influence of gender role typing on the expression of depressive symptoms. They found that participants identified as "feminine" on the BSRI reported more emotional symptoms (such as self-dislike, sadness, and sense of failure) than did "masculine" participants. Masculine participants reported more withdrawal (e.g., work retardation, social withdrawal) and somatic symptoms than feminine participants.

Reactions to stereotype violations. It is clear from the above review that gender stereotypes do exist and that some are more factually based than are others. Social reaction to violations of these stereotypes is an issue of direct relevance to the present study. As was noted in the discussion on display rules, society tends to react negatively to violations of prescriptive gender stereotypes and reward adherence to these stereotypes. Brody, Lovas, and Hay (1995) noted that cross-gender characteristics may elicit intense affect in observers because they violate expectations of how people should behave. In general, females have been found to be more tolerant of gender role violations than males. Cunningham, Strassberg, and Haan (1986) found that female participants did not respond differently to scripts (supposedly written by other participants) that were either congruent or incongruent with the putative author's sex-role. However, male participants liked the authors of sex-role-incongruent scripts less than the authors of sex-role-congruent scripts, and rated incongruent male authors as being in poorer mental health than congruent male authors. In a study using the BSRI, Scher (1984) found that men showed more sex-typing than women when asked to describe their ideal male and

female with regard to sex-typed masculine and feminine characteristics. Females described androgynous models for ideals, whereas males' portrayals of the ideal male and ideal female were sex-typed. There is also evidence that sex-role violations by a female subject may be tolerated more easily than violations by a male subject. For example, Smetana (1986) found that preschool children were more likely to view male sex-role deviations as violations of social norms than female sex-role violations.

Similar findings have been obtained in studies of reactions to depressed men and women. Hammen and Peters (1977) tested the hypothesis that higher rates of depression among women result from differential reinforcement for expressions of depressive affect among men and women, with females being more likely to be permitted dysphoric and self-deprecating behaviors than males. They compared reactions to male and female case histories of common responses to stress and found that depression elicited more rejection of males than of females. The sex difference in rejection of depression was more pronounced than for anxiety or flat affect/detached responses. They further found that depressed males were especially likely to be perceived as impaired in role functioning as compared with depressed females. They suggested that depressed males do not seem to be rejected for expression of emotionality as such, but that elements of the typical male role may be incompatible with some of the qualitative aspects of depression (such as passivity). Similarly, Hammen and Peters (1978) found that participants attributed significantly more feminine traits to depressed than to non-depressed persons, irrespective of the person's sex. They also found that depressed persons overall were more strongly rejected than non-depressed persons, especially by persons of the opposite

sex. In a study involving practicing counselors and therapists, Robertson and Fitzgerald (1990) found that the gender-role traditionality of a depressed male client significantly affected participants' judgements of and responses to the client. Specifically, therapists tended to believe that non-traditional role behavior was associated with more severe pathology, they behaved differently with the client (as reflected in the content of their responses), they were more likely to attribute the non-traditional client's depression to his life situation, and some targeted his non-traditional behavior pattern as an appropriate focus for therapeutic intervention.

Several studies indicate that perceivers' gender role characteristics will influence their perceptions of gender norms and of violations of these norms. Frable (1989) showed that sex-typed men and women displayed greater endorsement of gender rules and more dislike of violators than did cross-sex-typed, androgynous, or undifferentiated individuals (as identified on the BSRI). Lindsay and Zakahi (1996) found that gender-schematic perceivers (individuals who have gender schemata high in their hierarchy for perception and interpretation) were more likely to be bothered by individuals acting counter to gender stereotypes than were aschematics. Specifically, gender-schematic perceivers experienced less positive affect during initial interaction when encountering individuals who displayed behavior contrary to the stereotype for their given gender, as compared to individuals who acted according to the stereotype. Thompson, Grisanti, and Pleck (1985) found that college men who endorsed traditional male-role norms tended to be more homophobic, show more approval of a behavioral pattern emphasizing the instrumental self at the expense of the communal and expressive self, believe that self-disclosure to a

female friend is unmanly, and endorse the maintenance of asymmetrical decision-making power in intimate relationships.

Summary of Findings: Gender and Social Cognition

It is clear from the above review that gender is a very salient social category. The system of beliefs about gender is multifaceted, and would appear to develop somewhat systematically from a young age. Bem's account of sex-typing and gender-based schematic processing provides a means for understanding how social and cultural beliefs regarding masculinity and femininity become part of the individual's psychology. Gender stereotypes are ubiquitous in the thinking of the lay public and mental health professionals alike. One area in which the effects of these stereotypes are well established is in regard to emotional functioning: significantly greater emotionality and expressiveness are attributed to women than to men. Although this stereotype may hold true in certain circumstances, it is clear that the relation between gender and emotion is less general and more complex than is often assumed. Interesting gender differences have emerged in the study of disordered emotion (particularly depression) and sociocultural influences have been implicated as potential explanatory mechanisms. A number of authors have suggested that it is not sex but sex-role orientation that accounts for observed differences in the emotional functioning of men and women; this idea has received considerable research support. Regardless of the validity of gender stereotypes, it is clear their violation can provoke strong negative social reactions, resulting in potential rejection of the violator. These social consequences of violation at least partly account for the power of these stereotypes to regulate emotional and other behaviors of

men and women. In the final section of this review, the impact of gender and sex- typing on attitudes toward victims will be considered.

Attitudes toward Victims

Contrary to what might be expected, people do not always react positively to victims. In fact, a tendency to blame victims of misfortunes for their own fates has frequently been noted. Observation of this phenomenon led Lerner and Miller (1978) to propose the "just world hypothesis" which states that individuals have a need to believe that their environment is a just and orderly place where people usually get what they deserve. If others can suffer unjustly, then the individual must acknowledge the prospect that she or he too could suffer in this way. Lerner and Miller (1978) proposed that in order to preserve their belief in a just world, individuals may convince themselves that victims deserve to suffer, particularly in situations in which it is impossible to restore justice in any other way. They suggest that this effect may be moderated by factors such as empathy or identification with the victim, or victim attractiveness or status. Shaver (1970) viewed the just world hypothesis as one example of a "defensive attribution", a perceiver bias motivated by the need for self-protection.

It should be noted that the majority of research regarding social attitudes toward victims deals with responses to female rape victims, with only a small proportion of studies including male victims or victims of non-sexual assault. Attitudes have been assessed through the presentation of written or videotaped scenarios, following which participants are required to evaluate or make attributions about the victim, the situation, and sometimes also the perpetrator. Studies of responses to rape victims have examined

the impact of diverse characteristics of the victim, the perpetrator, the respondent, and situational variables. Findings regarding the impact of variables of interest to the present study, namely sex of victim, perceiver sex and gender role, and event type, will now be reviewed.

Sex of Victim

Given that most of the literature focuses on female victims of rape, very few studies investigate attitudes toward male trauma victims. A notable exception is a study by Schneider, Soh-Chiew Ee, and Aronson (1994). These authors presented male and female college students with a vignette describing a sexual assault, and varied the victim's sex. They found a main effect for sex of victim on the blame directed at the victim: overall, significantly more blame for the sexual assault was attributed to the female than to the male victim. Contrary findings were obtained by Krulewitz (1981), who compared participants' attitudes toward male and female assault victims who responded to the attack in various ways. She found that female victims were generally more liked than male victims and were attributed greater respectability, especially by men.

Howard (1984a) found that participants made distinctions in terms of the type of blame assigned to male and female assault victims: specifically, they attributed more global and characterological blame to female victims, and more behavioral blame to male victims. Howard (1984a, 1984b) pointed out that these attributional patterns are consistent with societal stereotypes about women and men. Items on the characterological factor closely parallel stereotypic personality traits of women -- they make reference to

the victim's trusting nature, passivity, and carelessness. Items on the behavioral factor contradict the traditional male stereotype – failure to fight, appearing scared, not trying to escape. She thus concluded that participants attributed blame to female victims for conforming to the female stereotype, and attributed blame to males for failing to conform to the male stereotype. Howard (1984a) further suggested that gender stereotypes appeared to influence evaluations of male and female victims in particular situations. In her study, female victims were perceived as more foolish than males when they were assaulted in a hitchhiking situation; they were perceived as more potent than males when they were assaulted in a jogging situation. Howard (1984a) also found that criminal victimization of women was perceived by participants as more likely than victimization of men; this pattern is contrary to actual statistics, likely reflecting sex-role stereotypes.

The relation between victim sex and perceptions of victims remains unclear, partly because the very small number of studies makes it difficult to draw any general conclusions. As shall be seen in the following section, research regarding the effects of perceiver sex on these evaluations or attributions is more plentiful.

Perceiver Sex

A number of studies have examined sex differences in attributions of responsibility and blame for rape. These studies have produced conflicting findings. Some studies have demonstrated that female participants attribute less fault to the victim and more responsibility to the assailants than do male participants; others have found that women attribute greater responsibility to the victim and less to the perpetrator than do men. Various explanations have been offered for these patterns. It has been hypothesized

that men are less able to understand the perspective of female victims. It has also been suggested women may blame a rape victim because of their need to feel in control of a violent situation involving a woman and because of their need to distance themselves from the victim (Brems & Wagner, 1994).

Deitz and Byrnes (1978) found that male participants believed a hypothetical rape victim was more likely to have done something to encourage the rape, identified less with the victim, and had more negative feelings toward the rape victim than did female participants. Females attributed greater responsibility for the rape to the perpetrator, were more certain of his guilt, rated the seriousness of the rape as greater, and rated the psychological impact on the victim as marginally greater than did the males. These researchers proposed that women may be able to identify with the victim more easily than men, and thus adopt the victim's perspective in viewing the incident. Similarly, Alicke and Yurok (1995) examined attitudes toward perpetrators of acquaintance rape and found that females tended to be more certain of the perpetrator's guilt and to recommend more severe punishment than did male participants. Females also saw the perpetrator as more responsible for initiating sexual intercourse than did males. Kleinke and Meyer (1990) found that men tended to attribute more responsibility to a female rape victim than did women, and held the rapist less responsible for the rape.

Best, Dansky, and Kilpatrick (1992) used hypothetical patient narratives to examine medical students' attitudes toward rape victims. They found that female medical students generally have more favorable attitudes toward rape victims (particularly less acceptance of rape myths) than their male counterparts.

It should be noted that some studies have not found differences between males and females in perceptions of victims. Brems and Wagner (1994) found that subject gender did not mediate attribution of blame in cases of rape or theft. Johnson (1994) also found no sex differences for attributions of responsibility, although males perceived a higher probability of victim enjoyment in rape situations than did females. Acock and Ireland (1983) found that the observer's own gender was not relevant to how seriously he or she rated the crime nor to any dispositional attributions to the victim or rapist. However, male observers had a more positive behavioral intention toward the rapist. Females reported a slightly more positive behavioral intention to the victim, but this was finding was non-significant (the authors do not explain what is specifically meant by "behavioral intention").

Several studies have found an interaction between perceiver sex and characteristics of the rape or other traumatic experience. Sheldon-Keller, Lloyd-McGarvey, West, and Canterbury (1994) found that in response to date-rape scenarios, males judged the aggressor's behavior as more excusable and the victim's behavior as less excusable than did females. Males were also more likely to rate the victim more negatively and perpetrator less negatively if the rape occurred in the context of a dating relationship as opposed to a friendship, whereas females did not make the same distinction. Best et al. (1992) found a significant interaction between type of crime and gender of perceiver: female medical students had more positive attitudes than males toward a victim of clear-cut rape and toward a (female) non-sexual assault victim. However, no sex differences in attitudes were found toward a victim whose experience of

rape was more ambiguous; both males and females had less positive attitudes to such a victim than toward the non-sexual assault victim and clear-cut rape victim.

It should be noted that all of the studies cited above have involved perceptions of female victims primarily of sexual assault. The extent to which these findings can be applied to male victims is highly questionable. A very small number of studies have considered interactions between victim sex and perceiver sex in influencing attitudes. Schneider et al. (1994) found a significant three-way interaction between victim sex, type of injury sustained and observer sex in attributions of guilt to the perpetrators. Male observers recommended longer prison terms for assaults on male victims when the injury was primarily physical or unspecified. They assigned more lenient sentences to assailants of male victims for whom the primary injury sustained was psychological. When the description of harm focussed on psychological injury, males assigned longer prison terms to the female's assailants. Schneider et al. (1994) argued that societal stereotypes of men as dominant, logical, decisive, and strong may make it difficult for male observers to grasp and comprehend the psychological aspects of victimization. Female observers assigned the least severe penalties to assailants of male victims who were coping primarily with physical injuries; females imposed more severe sentences on attackers of males who produced psychological posttraumatic stress in their victims. Female participants assigned longer prison terms to those who chose a female rather than a male victim, regardless of the predominant nature of the injury sustained. Differences in males and females' assessment of prison terms were most marked when the injury was primarily physical and perpetrated against a female as opposed to a male victim. Males

and females thus considered bodily injury inflicted on their own gender to be the most serious crime. Both genders agreed that emotional consequences of rape were likely to cause dysfunction for a longer interval and would require more treatment than the physical aftermaths.

Krulewitz (1981) looked at the effect of victim's sex and perceiver's sex on evaluations of strategies used by victims of assault. She found that consistent with sex-role stereotypes, men tended to endorse aggressive victim resistance whereas women endorsed non-aggressive responses; these response patterns were enhanced with same sex victims. Men identified much less with female victims (particularly non-aggressive victims) than females identified with male victims. Men appeared to apply a more stringent standard to female victims regarding compliance behaviors and were more willing to describe an assault against a non-aggressive male victim as a crime than when it was committed against a non-aggressive female victim.

Howard (1984b) found that female respondents tended to attribute more global and characterological blame to victims than did male respondents, who attributed more behavioral blame to the victim. Respondent and victim sex interacted in their effects on attributions of blame regarding the victim's behavior. Female respondents attributed roughly equal blame to the behavior of male and female respondents, whereas men attributed substantially more blame to the behavior of male than of female victims.

Most studies investigating the effects of perceiver sex on attitudes toward (primarily female rape) victims indicate more positive attitudes on the part of female perceivers, although these findings were not obtained in some studies. Interactions of

perceiver sex with victim sex and various situational variables in determining attitudes have also been described. However, studies involving male victims were very few, thus limiting the conclusions that can be drawn.

Perceiver's Gender-Role Orientation

A number of studies have found an association between gender-role orientation (and related attitudes) and reactions to victims. Acock and Ireland (1983) found that the sex-role attitude of the observer was an important factor in the attribution of blame in rape cases: participants with traditional sex-role attitudes viewed the victim as less respectable, blamed her more and blamed the rapist less. They also found that a female rape victim who behaves contrary to the conventionally accepted sex-role behavior of a woman (i.e., who engages in norm violation) was blamed more by participants. Participants attributed less blame to the rapist when norms were violated than when the victim's behavior was consistent with traditional sex-based norms. No interaction was obtained between the sex-role attitude of the observer and the extent to which the victim's behavior violated sex-role norms.

Simonson and Subich (1999) explored perceptions of different rape situations (stranger, acquaintance, date, or marital rape) in relation to observers' gender role traditionality. They found that observers holding less traditional gender-role stereotypes perceived rape scenarios overall as more serious and were less likely to blame the victim. Gender did not add significantly to the prediction of rape perceptions beyond the contribution of gender-role beliefs.

Quackenbush (1989) explored the relation between sex-role orientation in males (as measured on the BSRI) on various dimensions of attitudes toward acquaintance and stranger rape. In line with predictions based on gender schema theory, he found that masculine sex-typed and undifferentiated males repeatedly responded in a more rape-supportive fashion than did androgynous males. Specifically, masculine sex-typed and undifferentiated males expressed less empathy toward the victim than did androgynous males. Undifferentiated males attributed significantly greater personal responsibility to the victim for stranger rape than did masculine-sex-typed and androgynous participants. Masculine sex-typed and undifferentiated males attributed less responsibility to the rapist than androgynous males. Masculine-sex-typed and undifferentiated males also perceived rape in general as less serious than did androgynous males. They also displayed greater adversarial sexual beliefs, acceptance of interpersonal violence and rape myth acceptance than did androgynous males. Quackenbush (1989) attributed the similarity in attitudes of masculine sex-typed and undifferentiated males to the fact that, unlike androgynous males (who possess the skills of both masculinity and femininity), men in both of these categories lack feminine qualities. These qualities encompass expressive competencies such as concern for, and ability to respond empathically to others such as rape victims.

Attitudes toward women (traditional or egalitarian) have also been identified as possible reasons for gender differences in attributing blame and responsibility in regard to rape cases. Brems and Wagner (1994) found that in ambiguous crime situations, more blame was attributed to female victims and less responsibility to perpetrators if participants had traditional attitudes toward women. Attitudes toward women also

appeared to affect personality characteristics attributed to the victim: profeminist participants were more likely than traditional participants to give more positive ratings to the victim. However, it was unclear whether the higher ratings were in response to the fact that the rated person was female or the fact that she was a victim.

Krulewitz and Payne (1978) explored the relation between rapist force, observer sex, and sex role attitudes in determining attitudes toward female rape victims. As evidence of the use of force by the rapist increased, participants tended to blame the assailant more, and attribute less responsibility, more helplessness, and more respectability to the victim. An important exception to this general pattern was provided by women with more profeminist attitudes, who did not base their evaluation of the assault or victim on the rapist's use of force. In contrast, women with traditional sex-role attitudes were greatly influenced by the assailant's use of force. Sex-role attitudes did not appear to influence the rating of male participants, possibly due to males' lesser personal vulnerability to rape. Pro- and nonfeminist participants did not differ from one another in the degree of blame attributed to the victim or assailant.

In the only study examining the effects of sex-role orientation on attitudes to male as well as female victims, Howard (1984b) found than gender role attitudes had substantial moderating effects on the relation between victim sex and attributions of blame to victims. Participants with more traditional gender-role attitudes attributed more global and characterological blame to female than to male victims, and more behavioral blame to male than to female victims. Victim sex influenced neither global nor characterological attributions of blame among those participants with egalitarian gender-

role attitudes; however, these participants also attributed more behavioral blame to male than to female victims.

Considering the studies assessing the impact of perceiver gender role characteristics on their evaluations of victims, it appears that participants with more traditional or stereotypic attitudes tend to react more negatively to female rape victims in terms of attributions of blame as well as more general perceptions. The relative lack of studies exploring the impact of this variable on attitudes to male victims is once again apparent.

Event Type

As has been stated, most of the literature on attitudes toward victims focuses on the crime of rape and its subtypes (e.g., stranger or acquaintance rape). Where comparative studies do exist, these generally involve evaluations of rape victims versus victims of other crime types. For example, Brems and Wagner (1994) found that participants attributed more fault to the victim in cases of theft than in cases of rape. Conversely, more blame was attributed to the perpetrator for rape than for theft. Howard (1984a) found that victims of rape were evaluated more negatively than were victims of robbery, even though rape was perceived as more serious than robbery. Best et al. (1992) found that medical students had less favorable attitudes toward rape victims than toward victims of non-sexual assault. However, no studies have compared attitudes toward assault victims to attitudes toward victims of non-criminal traumatic events. There is a need for research to address this void.

Summary of Findings: Attitudes toward Victims

The present section has reviewed findings of research regarding social reactions to mainly female (rape) victims, with a far smaller proportion of studies focusing on responses to male trauma victims. The few studies that do compare attitudes to male and female victims have produced findings that are difficult to synthesize. The studies reviewed in this section suggest that perceiver sex and gender-role orientation do affect responses to victims. In general terms, female participants would seem to express more favorable attitudes toward victims, and positive attitudes would also appear to be associated with more liberal (less traditional) gender-role attitudes. However, the extent to which these findings can be generalized to other types of victims than those described in these studies is highly questionable. A further difficulty in drawing general conclusions from the studies reviewed here relates to different ways of operationalizing attitudes: whereas some studies have investigated general perceptions, others have looked at more specific social-cognitive processes such as attributions of blame.

Overall Summary and Description of the Present Study

The introduction of PTSD as a formal diagnosis in 1980 sparked much research into various facets of this disorder, including its epidemiology among the general population and among groups exposed to specific types of trauma. One of the striking findings of this area of research has been an apparent sex difference in prevalence. Women appear to have at least twice the risk of developing PTSD than men, despite men's greater likelihood of experiencing traumatic events. These findings have been obtained consistently in studies of the general population and of victims of criminal

violence. The literature with regard to victims of natural disasters is somewhat more equivocal; although when sex differences have been obtained, they are always in the direction of women being more vulnerable. Possible methodological, social, and theoretical explanations for this finding were reviewed, many of which refer implicitly or explicitly to the importance of social and cultural beliefs regarding gender-appropriate behavior and responses in the individual's processing of the traumatic experience. Beliefs and stereotypes about gender, internalized through processes such as sex typing, provide a lens through which important information about the self and others is perceived.

This review has highlighted some important distinctions between stereotypes of men and women: in general, men are stereotypically presumed to possess high levels of agentic qualities such as independence, assertiveness and mastery; women are expected to possess communal attributes such as nurturance and concern for others. Emotionality is stereotypically associated with women, whereas emotional control is associated with men. Gender stereotypes are powerful forces in influencing behavior, at least partly because violation of these stereotypes may provoke strong negative social consequences. Studies of both normal and disordered emotional functioning confirm that greater social permission exists for women to express particular types of affects (for example, sadness or depression) than for men, and that emotional problems may be expressed in ways that are congruent with sex-role stereotypes.

Gender and sex-role stereotypes have also been found to influence attitudes toward victims, although conclusions are limited by the fact that most available literature deals with reactions to female rape victims. Based on these studies, there is some

evidence that women and individuals with more liberal sex-role attitudes (i.e., less sex-typing) express more victim-supportive attitudes and less victim blame than others.

As a whole, it appears that social beliefs about gender-appropriate responses to traumatic events may influence the psychological reactions of victims and contribute to the sex differences in prevalence of PTSD highlighted in the epidemiological literature. Only one study (Norris et al., 2001) has been identified that attempted to explore empirically the relation between culturally based beliefs about gender and posttraumatic stress symptomatology among men and women exposed to a specific type of traumatic event. The nature of gender-related social beliefs about victimization and its associated psychological responses within broad contemporary American culture has not previously been explicated. It is hypothesized here that the experience of victimization and distress symptoms related to a traumatic event may be perceived as more compatible with a female than a male gender role. Given the literature suggesting that people in general do not react favorably to gender role violations, it is anticipated that they would express less positive attitudes toward men than toward women with PTSD symptoms. It is further hypothesized that this effect may be more or less strong depending on the type of trauma experienced. Gender-based assumptions about appropriate responses may be stronger for traumas involving a human adversary where there is the possibility of fighting back to regain control over the situation (for example, criminal violence), than for traumas such as natural disasters in regard to which such agentic responses are less viable. As men and women are socialized differently with regard to participation in physical violence, assumptions about their differential ability to cope with experiences involving such

violence may be particularly strong. Although the perceivers' gender may influence how favorably they regard male and female trauma survivors respectively, based on the literature reviewed it is anticipated that perceivers' gender-role attitudes or degree of sex-typing may have a significant additional influence. Perceivers' personal experiences of victimization are another unexplored factor that may mediate attitudes to victims by promoting empathy or identification with the victim.

Research exploring these relations would contribute evidence to support or dispute theories of sex differences in PTSD based on the potential impact of gender-related social attitudes about responses to victimization. These attitudes may influence the victimized individual's presentation in a variety of ways; for example, they may affect the number and types of symptoms experienced or expressed, or they may affect patterns of help seeking. Such research would provide information about the types of responses that traumatized men and women may receive from others in their social environment. Although there is considerable research on responses to female rape victims, very little data are available regarding the types of social reactions that may be experienced by male trauma victims and victims of other types of traumas such as natural disasters. As social support has consistently been identified as a factor that mediates the psychological and physiological effects of stress (e.g., Cohen & Wills, 1985; Kiecolt-Glaser, 1999), information about how others perceive traumatized individuals may be used to inform public psycho-education aimed at enhancing the amount of support that traumatized individuals receive. As was noted in the review of the literature, clinicians may be prone to similar attitudinal biases as the general public; thus, such research can

identify the nature of the preconceptions that may affect assessment, diagnosis, and treatment of traumatized individuals, and also may affect PTSD prevalence estimates.

The aim of the present study was to examine how people differ in their evaluations of men and women with PTSD, and to identify some factors that may influence these evaluations. Participants (male and female undergraduate students) were administered vignettes describing male and female victims of two different types of trauma: criminal assault and natural disaster. Victims were portrayed as experiencing posttraumatic stress symptoms. Participants were asked to evaluate the hypothetical victims in terms of a number of social dimensions, such as attractiveness, likability, and competence. Participants were also administered a series of measures including an inventory evaluating sex-role orientation, an inventory of traumatic experiences, and a brief demographic questionnaire. The independent and combined effects of sex of victim, sex of participant, participant sex-role orientation, and type of trauma on attitudes were investigated, as was the association between personal trauma history and attitudes toward victims. The specific a priori hypotheses of this study were as follows:

1. There will be a main effect for sex of victim such that participants will evaluate hypothetical male trauma victims less favorably than hypothetical female victims on social dimensions.

2. There will be a main effect for sex of participant such that male participants will judge all trauma victims more negatively than will female participants.

3. There will be a two-way interaction between sex of participant and sex of hypothetical victim: male participants will differentiate more than female participants between male and female victims by rating male victims more negatively.

4. The relation between sex of participant and attitudes toward victims will be moderated by participant sex-role orientation: masculine sex-typed males will rate victims more negatively than will androgynous males and feminine sex-typed and androgynous females.

5. There will be a two-way interaction between participant sex-role orientation and sex of hypothetical victim: sex-congruent sex-typed individuals will differentiate more than androgynous individuals between male and female victims by rating male victims more negatively.

6. There will be a two-way interaction between sex of victim and trauma type: participants will rate male victims of criminal violence less positively than female victims of criminal violence, but they will not differentiate between male and female victims of natural disasters.

7. There will be a positive relation between personal trauma history (number of different traumatic events experienced) and attitudes towards victims: participants who have personally experienced more traumatic events will express more favorable attitudes towards victims.

CHAPTER 2

METHODS

Pilot Study

As the vignettes assessing attitudes toward trauma victims were developed for the purpose of this research, a pilot study was conducted to determine the optimal mode of administration and analysis of the obtained data. The pilot sample consisted of 19 male and 28 female undergraduate psychology students who obtained extra credit for their participation. The methodology of the present study requires that participants are presented with pairs of vignettes that are identical apart from the sex of the protagonist; a primary issue considered in the pilot study was thus how to reduce the effects of memory on their ratings of the vignette characters. The first step taken to address this problem involved the inclusion of four distracter vignettes, two of which were drawn from the rape literature and two devised for this study. The second step involved administration of all the vignettes to 20 participants in one testing session, and administration of the vignettes split equally over two testing sessions (scheduled three weeks apart) to another 27 participants. Examination of the ratings obtained using one versus two testing sessions revealed no substantial differences in the variability of responses and thus no distinct advantage associated with two testing sessions. The results of the pilot testing also suggested some changes in instructions to participants to reduce memory effects.

Another issue considered in the pilot study was the optimal response format for the ratings of vignette characters. Participants were administered versions of the vignettes containing either a Likert-type scale or a visual analog scale response format. Examination of the responses suggested that participants tended to make fewer ratings in the middle of the scale using the visual analog than the Likert-type scale. The visual analog scale was thus preferred as a means of enhancing the variability of ratings.

A third key issue investigated in the pilot study involved the properties of the vignette ratings as scales. Specifically, it was important to determine whether ratings of the different social dimensions could be analyzed as a scale (for example, based on a single mean score), or whether they should be analyzed item-by-item. Internal consistency reliability (coefficient α) and item-total correlations were computed for responses to each vignette. The mean α obtained was .84, indicating that the ratings for each vignette can be appropriately analyzed as a scale.

Participants

Participants included 93 male and 179 female undergraduate psychology students who received extra credit for their participation. An a priori power analysis for ANOVA, assuming a moderate effect size and significance level of $p < .05$, indicated that a total sample size of 128 would be necessary in order to obtain power of .8. The racial composition of the sample was as follows: 63% percent identified themselves as Caucasian, 19% as African-American, and 11% as Latino/a. Other groups, including students of Asian, Native American and mixed origin comprised the remaining 7% of the sample. Participants ranged in age between 18 and 49 years, with a mean of 20.72 years

(SD = 3.65). Signed informed consent was obtained and each participant received a copy of the consent form (see Appendix A). Consent forms were detached from the questionnaire packages so that participants' names could not be linked with their responses.

Design

The design of the present study was experimental as the researcher manipulated two of the independent variables (sex of vignette character, and type of trauma experienced) and had control over the assignment of participants to conditions (Kazdin, 1998). There were four independent variables: sex of participant (male or female), sex of hypothetical trauma victim (male or female), type of trauma described in the vignette (criminal violence or natural disaster), and sex-role orientation of participant (masculine/feminine sex-typed, androgynous or undifferentiated). Sex and sex-role orientation of participants were between-subjects factors; sex of hypothetical victim and trauma type were within-subjects factors as all participants were exposed to each condition of these variables. The major benefit of designs in which the same participants are exposed to different experimental conditions is that they provide a control on variability due to differences between participants, thereby reducing error (Winer, Brown, & Michels, 1991). Participants' personal trauma history was a continuous variable that was tested for its correlation with the dependent variable. The dependent variable in this study was evaluative attitude toward trauma victims.

Independent Variables

Participants indicated their sex on a brief demographic questionnaire. Participant sex-role orientation was identified based on their scores on the Masculinity and Femininity scales of the Bem Sex Role Inventory. Victim sex was operationalized in terms of the sex of the vignette characters. In terms of trauma type, a tornado was used to exemplify a natural disaster; whereas a mugging/assault incident was used to represent criminal violence. Personal trauma history was quantified as the number of different traumatic events to which the participant had been exposed, as measured by a trauma screening instrument.

Measures

Demographic questionnaire. Participants were required to respond to a few questions regarding their sex, age, and race/ethnicity (see Appendix B).

Attitudes toward trauma victims. Participants read four different vignettes, each describing a male or female trauma victim who has experienced either a mugging/assault ("Bob" or "Julie") or a tornado ("Mike" or "Mary") and is exhibiting distress in the form of symptoms of post-traumatic stress disorder (see Appendix C). Following the presentation of each vignette, participants were required to rate the hypothetical victim on a number of social dimensions, using visual analog scales. This type of vignette methodology has been used extensively to assess social attitudes toward rape victims and perpetrators (e.g., Brems & Wagner, 1994; Schneider, Soh-Chiew Ee, & Aronson, 1994). Social dimensions of interest in this study included likability, attractiveness as a friend and romantic partner, intelligence, competence and general feeling about the vignette

protagonist. The use of visual analog scales involved presenting participants with a continuous line (100 mm in length in this study) between a pair of descriptors representing opposite ends of a continuum. The individual completing the item was instructed to place a mark at a point on the line that represented his or her opinion or belief. In addition to their easy use, visual analog scales have a number of other advantages: they are potentially very sensitive and may reduce memory effects as it is difficult for participants to encode past responses with precision (DeVellis, 1991). Bond and Lader (1974) also pointed out that visual analog scales lessen the problem of response sets, as there appears to be no tendency for an excess of participants to rate scales down the center. For each vignette, the participant's rating of the protagonist on each social dimension was represented numerically by the distance of his or her mark on the visual analog scale from the start-point of the line (measured in millimeters). As the results of the pilot study indicated that the items measuring attitudes towards the vignette protagonists had good internal consistency (mean $\alpha = .84$) and could be analyzed as a scale, participants' ratings on the five social dimensions on each vignette were summed and a mean rating for each vignette was computed. Scores reflecting attitudes towards victims of each sex were obtained by averaging each participant's ratings of the two female and two male protagonists respectively. The same approach was used to obtain overall ratings of respective attitudes towards tornado and mugging/assault victims. A score reflecting attitudes towards all victims was obtained by averaging participants' mean ratings on all four vignettes. These summary scores were used as a basis for the statistical analyses.

Sex-role orientation. Sex-role orientation was assessed using the Bem Sex-Role Inventory (BSRI; Bem,1974) mentioned earlier. The BSRI provides independent assessments of masculinity and femininity in terms of the respondent's self-reported possession of socially desirable, stereotypically masculine and feminine personality characteristics. Congruent with Bem's (1974) conception of a sex-typed person as someone who has internalized society's sex-typed standards of desirable behavior for men and women, these characteristics were selected as masculine or feminine on the basis of their sex-typed social desirability (as indicated by independent ratings by Bem's male and female participants) as opposed to differential endorsement by males and females. The BSRI is a self-administered 60-item questionnaire, containing a Masculinity scale (20 items), a Femininity scale (20 items), and 20 neutral filler or Social Desirability items. Each item is a personality characteristic, for example "Acts as a leader" (Masculine), "Aggressive" (Masculine), "Compassionate" (Feminine), "Gentle" (Feminine), and "Conscientious" (Social Desirability), "Happy" (Social Desirability). The participant is asked to indicate how well each characteristic describes himself or herself on a seven-point rating scale ranging from 1, "never or almost never true" to 7, "always or almost always true". The entire BSRI can be completed in about 15 minutes (Bem, 1974; Beere, 1991; Lenney, 1991).

The most common procedure for scoring the BSRI involves use of a median split method, which divides participants into sex-role groups by whether their scores fall above or below the median Masculinity (M) and Femininity (F) scores. This method defines participants as masculine sex-typed if their M score is above the M median; as

feminine sex-typed if their F score is above the F median; as androgynous if both of their scores are above the respective scale medians; and as undifferentiated if both their scores are below the respective scale medians. It is recommended that the medians used are determined for the particular research sample (Lenney, 1991).

Beere (1991) indicates that the BSRI is by far the most commonly used measure in all areas of gender-related research and reports over 1,000 published articles and documents on this particular test. Lenney (1991) observed that the BSRI is among the five most frequently used tests in the Mental Measurements Yearbook. Bem's (1974) original development and standardization sample consisted of 444 male and 279 female undergraduate students at Stanford University, and 117 male and 74 female students at a junior college. Beere (1991) indicates that college students are the group most often tested with the BSRI, although this test has been used with groups as diverse as attorneys, prostitutes, psychiatric inpatients, homosexual fathers, psychotherapists and incarcerated criminals, to name but a few. In addition to its use among different cultural groups in the US, the BSRI has also been used in numerous foreign countries, sometimes after translation or adaptation.

The BSRI has been extensively studied, and would appear to have good reliability and adequate validity when used in ways suggested by the theoretical rationale underlying its development (Lenney, 1991). Bem (1974) reported good internal consistency reliability for the three sets of items among her Stanford undergraduate students (Masculinity α = .86; Femininity α = .80; Social Desirability α =.75) and junior college sample (Masculinity α = .86; Femininity α = .82; Social Desirability α = .70).

Similar results have been obtained in subsequent studies (e.g., Wilson & Cook, 1984). Bem (1974) found high test-retest reliability among 28 males and 28 females from the Stanford normative sample over a four-week period (Masculinity $\underline{r}$ = .90; Femininity $\underline{r}$ = .90; Androgyny $\underline{r}$ = .93; Social Desirability $\underline{r}$ = .89). Yanico (1985) found significant, moderate test-retest reliability among female university students over a four-year period (Masculinity $\underline{r}$ = .56; Femininity $\underline{r}$ = .68)

Bem's (1974) analyses supported her contention that masculinity and femininity are logically independent. She obtained correlations of .11 and -.14 for the Stanford males and females, and correlations of -.02 and -.07 for the junior college males and females respectively. Lenney (1991) indicated that empirical independence of the Masculinity and Femininity scales has been largely supported by factor analytic studies. Some studies have found that some of the supposedly neutral Social Desirability items (e.g. "Helpful", "Sincere", "Friendly") tend to load onto the factor associated with Femininity (Ballard-Reisch & Elton, 1992). As Bem (1974) pointed out, because the masculine and feminine items are all relatively desirable even for the "inappropriate" sex, it is important to verify that scores on the Androgyny scale (high Masculinity and high Femininity) are not simply tapping social desirability response set. In line with Bem's (1974) original findings, Lenney (1991) concludes that the weight of the evidence demonstrates that BSRI scales have adequate freedom from socially desirable responding. In terms of the relation between sex and BSRI scores, as would be expected Bem (1974) found that males scored significantly higher on the Masculinity scale than females, and that females scored significantly higher on the Femininity scale than males.

Lenney (1991) indicated that many studies have supported Bem's contention that androgynous individuals tend to show greater behavioral flexibility than masculine or feminine individuals (although not necessarily better mental health as Bem originally proposed). As reported earlier, Bem and others have provided evidence that sex-typed persons, who are gender schematic, tend to organize and process information along gender lines to a greater extent than androgynous individuals, who are aschematic. Lenney (1991) points out however, that there have been failures to replicate some of Bem's findings and that critics dispute the use of measures such as the BSRI to assess gender schematicity. The BSRI scales would appear to correlate at least moderately well with similar measures. For example, correlations with Spence et al.'s PAQ range from between .56 and .85 for the Masculinity scale and between .59 and .86 for the Femininity scale (Lenney, 1991).

In light of concerns raised regarding changes in the roles of men and women in society since the publication of the BSRI, Holt and Ellis (1998) conducted a recent study exploring the continued validity of its items. They presented college students with the adjectives from the BSRI, and asked them to rate the desirability of each characteristic for a man or a woman in American society. They found that all masculine adjectives and all but two feminine adjectives ("loyal" and "childlike") were rated as significantly more desirable for a man or a woman, respectively, suggesting the continued validity of the BSRI as a measure of gender role perceptions. Interestingly, they found decreased magnitude of the difference scores for social desirability of the adjectives for men and

women, indicating that gender stereotyping was weaker in their sample than in Bem's 1974 sample.

Personal histories of trauma. Personal experiences of victimization were evaluated using the Trauma History Questionnaire (THQ; Green, 1996), displayed in Appendix D. The THQ is a self-report inventory, measuring a history of exposure to potentially traumatic events that may meet the A1 stressor criterion for DSM-IV PTSD. The THQ consists of 24 items that address a range of traumatic events in three areas: crime-related events (e.g., robbery, mugging), general disaster and trauma (e.g., serious accident, natural disaster, military combat), and unwanted physical and sexual experiences (e.g., forced intercourse, oral or anal sex, assault with a weapon). For the first two sets of items, respondents indicate whether they have ever had the experience, and if so, the number of times and age of occurrence. For the third set of items, respondents indicate whether they have had the experience, whether it was repeated, and if so, how often and at what ages. Specific details are requested for some questions (e.g., nature of relationship to the perpetrator for unwanted sexual experiences). A final item asks about "any other extraordinarily stressful situation or event that is not covered above. If yes, please specify". The instrument is frequently used in conjunction with an interview to clarify the specific nature of the person's traumatic experience, preparatory to a diagnostic interview for PTSD. Green (1996) notes that the THQ has also been used as a straight self-report measure, although the user is cautioned about the possibility of false positives on certain items (e.g., "Have you ever received news of a serious injury, life-threatening illness or unexpected death of someone close to you?"). Although no final

scoring system has been devised for the THQ, Green (1996) indicates that a total score and summary scores can be calculated, or relations with individual items can be explored. In the present study, a total score based on the number of discrete traumas experienced by participants was used in the analyses. As this score did not take into account the fact that some traumatic events were repeated, another score was computed based on the average frequency with which all traumatic events were experienced by each participant.

Green (1996) provides descriptive data (frequency and number of events by gender) on three samples: psychiatric outpatients, college students, and breast cancer survivors. The college student sample consisted of 423 individuals in psychology, economics, and nursing classes recruited from three different campuses in the Washington, D.C. area. Sixty eight percent were women and 91% were single. Sixty five percent were White, 16% were Black, and 18% consisted of members of other minority groups. Ages ranged from 17 to 49 years, with 83% age 22 years or less. Green (1996) reports a test-retest study of 25 college women, indicating fairly good stability over a two to three month period for reporting of most events. The items with the lowest reliabilities were “catch-all” items (e.g., other unwanted sexual experience). Other than these items, stability coefficients ranged from .51 (close person killed) to 1.0 (seen or handled dead bodies). The THQ has also been used in published studies (cited in Green, 1996) with several other populations such as substance abusers (e.g., Najavits et al., 1998) and children of Holocaust survivors (Yehuda, Schmeidler, Wainberg, Binder-Brynes, & Duvdevani, 1998). Norris and Riad (1997) noted that the population of relevant events covered by the THQ is among the broadest covered by such instruments.

Procedure

Data were collected in the Fall semester of 2000, by the researcher and an assistant. Participants were told that that they would be asked to read several short stories about people who have been involved in different types of stressful experiences, and provide information about their reactions. They were also told that they would be asked to complete some questionnaires about their attitudes and about experiences that they may have had. As indicated above, the pilot study revealed that data could be effectively collected in one testing session, eliminating potential problems related to attrition. To reduce the salience of the vignette characteristics of interest, participants were also administered four "distracter" vignettes interspersed with the real vignettes, two of which were adapted from the rape literature and two developed for the purpose of this study (see Appendix E). Participants were administered the consent form and demographic questionnaire, followed by the eight (four real and four distracter) vignettes. The order of the target vignettes was counterbalanced to reduce order effects. Participants were then administered the BRSI and the THQ, in a counterbalanced manner. Testing took approximately 40 minutes.

Data Analysis

The present study has a mixed factorial design: sex of participant and sex-role orientation are between-subjects factors, and sex of victim and trauma type are within-subjects factors. The dependent variable is evaluative attitude toward trauma victims, derived from participants' ratings of hypothetical victims on various social dimensions. Descriptive statistics are presented for all study variables. The statistical technique that

was used to test hypotheses about the effects of sex of participant, sex-role orientation, sex of victim and trauma type on attitudes toward victims was mixed model analysis of variance (ANOVA). Preliminary examination of the data confirmed that the major assumptions of this model were met. Significant interactions were subjected to post-hoc analyses to determine the sources of the differences. Pearson product moment correlation was used to test the hypothesis that there would be a positive relation between personal trauma history (number of different traumatic events experienced) and attitudes towards victims.

CHAPTER 3

RESULTS

Descriptive Data

Attitudes toward trauma victims. Internal consistency reliability was computed for the items of each vignette: Mary (female/tornado) $\alpha = .85$, Mike (male/tornado) $\alpha = .85$, Julie (female/assault) $\alpha = .82$, Bob (male/assault) $\alpha = .84$. Means and standard deviations for ratings on each vignette are displayed in Table 1. The results of hypothesis testing regarding the impact of victim sex and trauma type on attitudes toward victims are discussed in a later section.

Table 1

Ratings of Male and Female Victims of Tornado and Assault

	Vignette			
	Male/Tornado	Female/Tornado	Male/Assault	Female/Assault
M	58.77	60.03	60.88	65.94
SD	16.86	16.56	16.61	15.07
N	270	271	271	271

Sex-role orientation. Coefficient α was calculated as a measure of the internal consistency of the BSRI scales of interest. Internal consistency reliability was found to be high for both scales (Masculinity $\alpha = .86$; Femininity $\alpha = .82$). As would be expected

based on Bem's (1974) analyses, correlations between scores on the Masculinity and Femininity scales were very low (r = .13 for males, ns; r = .01 for females, ns). The means and standard deviations of male and female participants on the Masculinity and Femininity scales are displayed in Table 2.

Table 2

BSRI Masculinity and Femininity Scale Scores by Participant Sex

	Masculinity Scale		Femininity Scale	
	Males	Females	Males	Females
M	4.93	4.77	4.61	5.19
SD	.77	.72	.60	.62
N	91	179	91	179

As was noted earlier, the BSRI is most commonly scored using a median split method, based on sample-specific medians. Given the unequal number of males and females in the present sample and its potential impact on the medians of the Masculinity and Femininity scales, a refined sample was used for the calculation of these medians. This sample consisted of an equal number of males and females, closely matched for age and racial background and totaling 184 participants. The medians obtained based on the refined sample were 4.90 on the Masculinity scale and 4.95 on the Femininity scale. These medians were then applied to the total sample and participants were classified by their sex-role orientation according to Bem's approach to categorization described above. Fifty-three participants (19%) were masculine sex-typed, 74 (27%) were feminine sex-

typed, 67 (25%) were androgynous, and 63 (23%) were undifferentiated. Fifteen participants (6%) could not be classified due to missing data or because their scores corresponded to the median of either scale. A significant difference was obtained between the proportions of male and female participants in each of Bem's categories, χ^2 (3, N = 257) = 41.73, p < .001, see Table 3.

Table 3

Sex-Role Orientation Category by Participant Sex

	Sex-Role Orientation			
Sex	Masculine	Feminine	Androgynous	Undifferentiated
Male (n = 89)	29 (33%)	7 (8%)	19 (21%)	34 (38%)
Female (n = 168)	24 (14%)	67 (40%)	48 (29%)	29 (17%)

Personal trauma histories. The frequencies and percentages of males and females reporting exposure to each event described on the THQ are displayed in Table 4. Ninety four percent of both male and female participants reported experiencing at least one of the listed traumatic events in their lifetime. The most frequently reported event by far was having received news of the serious injury, illness, or unexpected death of someone close (experienced by 68% of participants). The following events were also reported by at least one-third of participants: involvement in a serious accident, robbery, experiencing a natural disaster (e.g., tornado, flood, earthquake), and seeing someone seriously injured or killed. Exposure to combat was reported by only one participant. The death of an immediate family member (partner, spouse, or child) and exposure to dangerous

chemicals or toxins were also reported relatively infrequently. The mean number of different events experienced by participants was 3.99 (SD = 2.75). The average frequency with which participants reported experiencing the events was 2.08 (SD = 1.90).

Green (1996) reports a high false-positive rate associated with the item regarding having received news of the serious injury, illness or unexpected death of someone close. Trauma exposure was therefore re-examined excluding this item. Without this item, 88% of participants reported having experienced at least one traumatic event. The mean number of different events experienced by participants was 3.31 (SD = 2.60), and the average frequency with which participants reported experiencing the events was 2.10 (SD = 2.08). The correlations between the different ways of operationalizating trauma exposure (i.e., with and without the "received news" item) were very high, $r > .97$, $p < .001$, and thus only the full scale will be used in subsequent analyses.

Chi-square analyses were performed to compare the proportion of males and females experiencing each traumatic event. The results are displayed in Table 4. Significantly more males than females reported experiencing a mugging and seeing or handling dead bodies. All forms of sexual assault were reported significantly more frequently by females than by males. A significantly greater proportion of females also reported having received news of the serious injury, illness, or unexpected death of a close person.

Table 4

Frequency and Proportion of Participants Reporting Exposure to Traumatic Events by Sex

Traumatic Event	Total (N = 272)	Males (N = 93)	Females (N = 179)	$\chi^2(1)$
Mugging	24 (9%)	16 (17%)	8 (5%)	12.34**
Robbery	88 (32%)	37 (40%)	51 (29%)	3.57
Break-In (While Gone)	68 (25%)	23 (25%)	45 (25%)	.01
Break-In (While Home)	22 (8%)	8 (9%)	14 (8%)	.05
Serious Accident	91 (34%)	29 (31%)	62 (35%)	.33
Natural Disaster	81 (30%)	24 (26%)	57 (32%)	1.07
"Man-Made" Disaster	21 (8%)	8 (9%)	13 (7%)	.15
Exposure to Chemicals/Toxins	14 (5%)	7 (8%)	7 (4%)	1.64
Other Situation - Serious Injury	22 (8%)	10 (11%)	12 (7%)	1.35
Other Situation - Feared Being Killed/Injured	47 (17%)	21 (23%)	26 (15%)	2.78
Seen Someone Killed/Injured	82 (30%)	32 (34%)	50 (28%)	1.22
Seen/Handled Dead Bodies	57 (21%)	29 (31%)	28 (16%)	8.92**
Friend/Family Member Killed	36 (13%)	7 (8%)	29 (16%)	4.01
Immediate Family Member Die	10 (4%)	3 (3%)	7 (4%)	--
Serious Illness (Self)	24 (9%)	10 (11%)	14 (8%)	.65

Injury/Illness/Death of				
Someone Close	185 (68%)	55 (59%)	130 (73%)	5.12*
Combat	1 (<1%)	1 (1%)	0(0%)	--
Forced Sexual Intercourse	45 (17%)	6 (7%)	39 (22%)	10.43**
Forced Sexual Touching	44 (16%)	5 (5%)	39 (22%)	12.16**
Other Unwanted Sexual Contact	34 (13%)	5 (5%)	29 (16%)	6.56*
Attacked with Weapon	25 (9%)	11 (12%)	14 (8%)	1.18
Attacked/No Weapon	22 (8%)	8 (9%)	14 (8%)	.05
Beaten/Spanked by Family				
Member	43 (16%)	12 (13%)	31 (17%)	.90
Other Event	34 (13%)	7 (8%)	27 (15%)	3.20
Any Event	255 (94%)	87 (94%)	168 (94%)	.01

Note: Data missing where expected counts < 5.

*$p < .05$ **$p < .005$

As can be seen in Table 5, a large number of participants reported having experienced multiple different traumatic events. The distribution of the number of different events experienced did not differ significantly for males and females, $\chi^2(6, N = 272) = 1.66$, ns.

Table 5

Number of Traumatic Events Experienced by Participant Sex

Number of Events	Total (N = 272)	Males (n = 93)	Females (n = 179)

None	17 (6%)	6 (7%)	11 (6%)
1-2	78 (29%)	26 (28%)	52 (29%)
3-4	81 (30%)	30 (32%)	51 (29%)
5-6	52 (19%)	16 (17%)	36 (20%)
7-8	24 (9%)	9 (10%)	15 (8%)
9-10	13 (5%)	3 (3%)	10 (6%)
11 or more	7 (3%)	3 (3%)	4 (2%)

T-tests were used to compare the THQ total scores of male and female participants. No significant difference was obtained in the total number of different traumatic events experienced by males ($\underline{M}$ = 3.95, $\underline{SD}$ = 2.75) and females ($\underline{M}$ = 4.02, $\underline{SD}$ = 2.75), $\underline{t}(270) = -.20$, $\underline{ns}$. There was no significant difference in the average frequency with which events were experienced by males (M = 2.35, SD = 2.57) and by females ($\underline{M}$ = 1.94, $\underline{SD}$ =1.43), $\underline{t}(253) = 1.63$, $\underline{ns}$.

Nineteen percent of participants (6% of males and 26% of females) who had experienced at least one traumatic event reported that they had sought psychological treatment related to that event. A chi-square analysis revealed a significant difference in the proportion of males and females who sought psychological treatment related to a traumatic event, $\chi^2(1, \underline{N} = 211) = 11.96$, $\underline{p} < .001$. Chi-square analyses were also used to evaluate the relationship between sex-role orientation and psychological treatment seeking among those who had experienced at least one traumatic event: no significant

differences were found between sex-role orientation groups, $\chi^2(3, \underline{N} = 200) = 2.37$, ns, see Table 6.

Table 6

Treatment Seeking by Sex-Role Orientation Category

	Sex-Role Orientation			
	Masculine	Feminine	Androgynous	Undifferentiated
Treatment	n = 44	n = 57	n = 51	n = 48
No	39 (89%)	46 (81%)	39 (77%)	39 (81%)
Yes	5 (11%)	11 (19%)	12 (24%)	9 (19%)

Note: Includes participants who experienced one or more traumatic events.

Hypothesis Testing

Hypotheses 1 - 3. The first three hypotheses were analyzed together using a 2 x 2 mixed model ANOVA. As was predicted by Hypothesis 1, a significant main effect was obtained for sex of victim, $\underline{F}(1, 269) = 31.30$, $\underline{p} < .001$, such that participants evaluated hypothetical male trauma victims ($\underline{M} = 59.88$, $\underline{SD} = 14.69$) less favorably than hypothetical female victims ($\underline{M} = 62.99$, $\underline{SD} = 13.90$) on social dimensions. The effect size was moderate to large ($\underline{f} = .34$), (Rosenthal and Rosnow, 1991).

As was predicted by Hypothesis 2, a significant main effect was obtained for sex of participant, $\underline{F}(1, 269) = 13.45$, $\underline{p} < .001$. Male participants ($\underline{M} = 57.34$, $\underline{SD} = 12.34$) judged all trauma victims more negatively than did female participants ($\underline{M} = 63.56$, $\underline{SD} = 13.68$). The effect size was moderate ($\underline{f} = .23$).

Hypothesis 3 predicted that there would be a two-way interaction between sex of participant and sex of hypothetical victim, such that male participants will differentiate more than female participants between male and female victims by rating male victims more negatively. This hypothesis was not supported: the analysis revealed no significant interaction between sex of participant and sex of hypothetical victim, $F(1, 269) = .92$, ns. A very small effect size was obtained ($f = .05$). Means and standard deviations for this analysis are displayed in Table 7.

Table 7

Ratings of Male and Female Victims by Participant Sex

	Victim Sex	
Participant Sex	Male	Female
Male ($n = 93$)		
M	55.43	59.27
SD	14.28	12.27
Female ($n = 178$)		
M	62.20	64.93
SD	14.40	14.33

Hypothesis 4. A one-way ANOVA was used to test the hypothesis that the relation between sex of participant and attitudes toward victims would be moderated by participant sex-role orientation, such that masculine sex-typed males would rate victims more negatively than would androgynous males and feminine sex-typed and androgynous

females. Masculine sex-typed males, feminine sex-typed females, androgynous males, androgynous females and cross-sex-typed females were compared with regard to their attitude toward victims. (Cross-sex-typed males were excluded from the analysis due to their small number; participants classified as undifferentiated were also excluded as no predictions about non-sex-typed individuals were made in the initial hypotheses.) A significant difference in attitude toward victims was obtained among the sex-role orientation groups, F (4, 182) = 4.17, $p < .005$. The effect size was moderate to large (f = .30). An examination of the group means reveals that feminine females (M = 66.61, SD = 13.64, n = 67) evaluated victims most positively, followed by androgynous females (M = 65.49, SD = 15.95, n = 48), androgynous males (M = 59.67, SD 11.97, n = 19), cross-sex-typed females (M = 58.45, SD = 12.23, n = 24), and finally, masculine males (M = 56.28, SD = 12.64, n = 29). Duncan's multiple range test was performed post hoc to determine the source of the significant result. It was established that masculine males rated victims significantly less favorably than did feminine females and androgynous females. Cross-sex-typed females also rated victims significantly less favorably than feminine females. No significant differences were obtained between androgynous males and any other group. Hypothesis 4 was thus partially supported. These results are displayed in Figure 1.

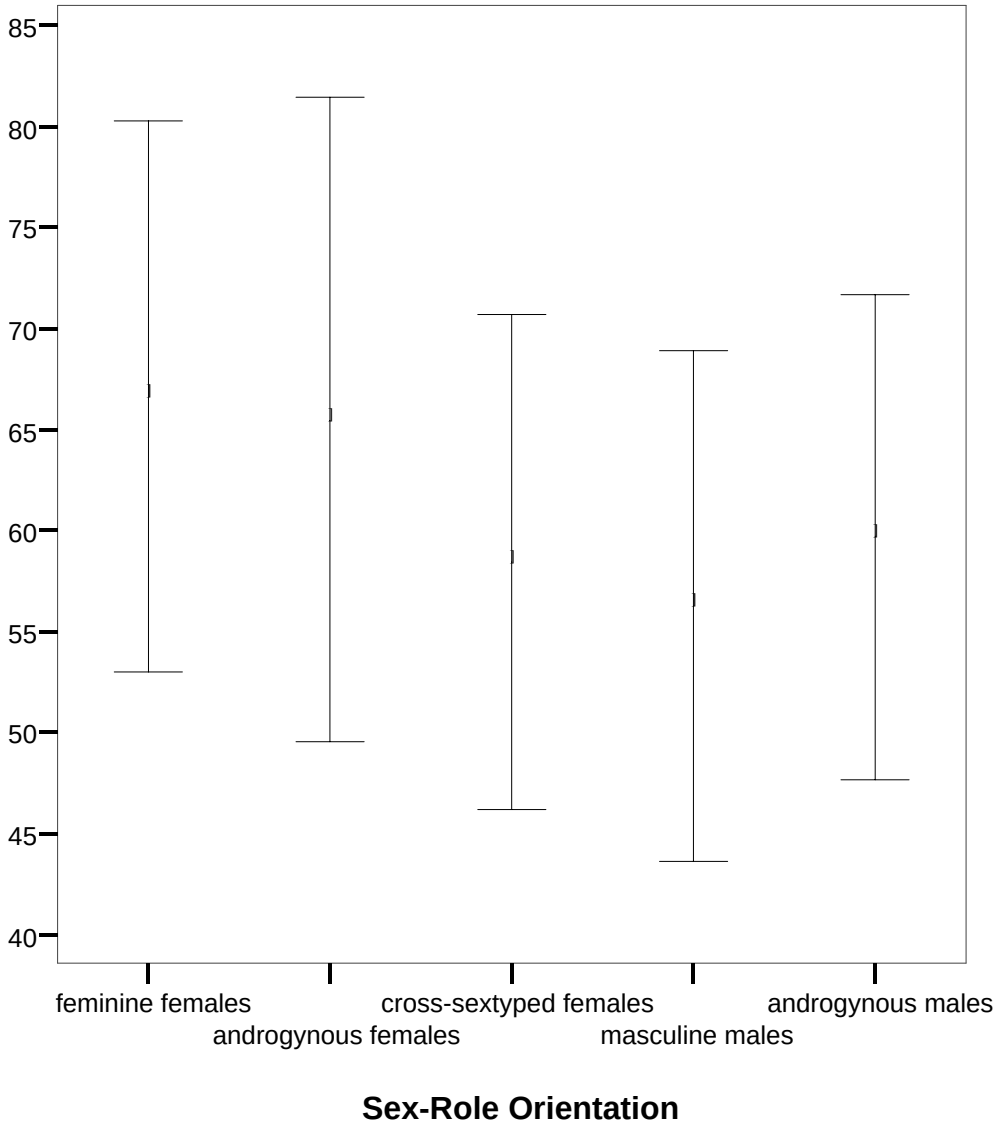


Figure1. Mean attitudes towards victims (+/- 1 SD) by sex-role orientation category.

Hypothesis 5. A 2 x 2 mixed model ANOVA was used to test the hypothesis that there would be a two-way interaction between participant sex-role orientation and sex of hypothetical victim, such that sex-congruent sex-typed individuals would differentiate more than androgynous individuals between male and female victims by rating male

victims more negatively. This hypothesis was not supported, F(1, 161) = 1.10, ns. The effect size was small (f = .08). The means and standard deviations for this analysis are displayed in Table 8. Further analyses were conducted to explore this hypothesis among males and females separately. Results were non-significant for males, F(1, 46) = .09, ns, and for females, F(1, 113) = 2.58, ns. The effect sizes for both groups were small (f = .04 for males; f = .15 for females).

Table 8

Ratings of Male and Female Victims by Sex-Typed and Androgynous Participants

	Victim Sex	
Participant Sex-Role Orientation	Male	Female
Sex-typed (n = 96)		
M	62.63	64.35
SD	15.22	14.39
Androgynous (n = 67)		
M	62.24	65.44
SD	15.79	15.56

Hypothesis 6. A 2 x 2 mixed model ANOVA was used to test the hypothesis that there would be a two-way interaction between sex of victim and trauma type, which was supported by the data, F(1, 269) = 11.67. As was predicted, participants differentiated significantly between male (M = 60.88, SD = 16.61) and female (M = 65.93, SD = 15.10)

victims of criminal violence but not between male (M = 58.77, SD = 16.86) and female (M = 59.99, SD = 16.57) victims of natural disasters. An examination of the means suggests that rather than evaluating male criminal violence victims more negatively (as was originally hypothesized), participants rated female criminal violence victims significantly more positively that other victims. The effect size was small to moderate (f = .20). The interaction is portrayed in Figure 2. An unhypothesized significant main effect was obtained for trauma type, F(1, 269) = 27.53, p < .001, such that participants rated assault victims (M = 63.40, SE = .87) more positively than tornado victims (M = 59.38, SE = .95). The effect size for this result was moderate to large (f = .31).

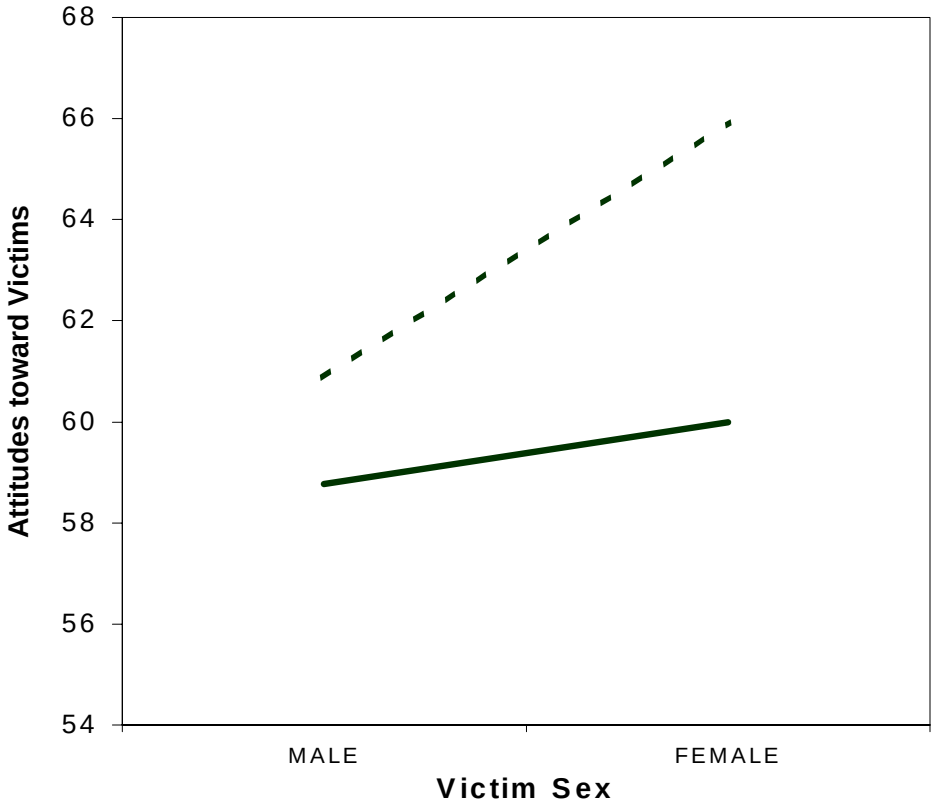


Figure 2. Interaction between victim sex and trauma type in determining ratings of victims.

Hypothesis 7. Pearson product moment correlations were computed for the sample as a whole as well as for males and females separately to test the hypothesis that there would be a positive relation between personal trauma history (number of different traumatic events experienced) and attitude toward victims, such that individuals who have personally experienced more traumatic events would express a more favorable attitude toward victims. As can be seen in Table 9, this hypothesis was supported only for males' attitudes toward male victims, $r = .17$, $p < .05$. Males who reported having personally experienced more traumatic events tended to have more favorable attitudes toward hypothetical male victims. There was no significant association between personal trauma history and attitude toward victims for female participants, or for either sex in their attitude toward female victims.

Table 9

Correlations between Number of Different Traumatic Events Experienced and Ratings of Victims

	All Victims	Male Victims	Female Victims
All Participants	.01	.04	-.03
Male Participants	.12	.17*	.05
Female Participants	-.05	-.03	-.06

* $p < .05$.

Supplemental Analyses

Supplemental analyses using independent-samples t-tests were performed to explore whether personal exposure to the particular traumas of interest affected attitude toward hypothetical victims of these traumas. First, participants who reported having experienced a natural disaster (M = 60.14, SD = 14.15, n = 81) were compared with those who did not (M = 59.13, SD = 16.10, n = 190) in regard to their attitudes toward the tornado victims. The result was non-significant, t(269) = -.49, ns. Participants who reported having experienced a physical assault or a mugging (M = 62.44, SD = 14.09, n = 125) were then compared with participants who did not report these events (M = 64.28, SD = 14.50, n = 146) in regard to their attitude toward victims of the assault/mugging trauma. Again, the difference was not significant, t(269) = 1.06, ns.

As a follow-up to the analysis of Hypothesis 4, which found significant differences among sex-role orientation groups on attitudes towards victims, two subsets of participants were identified whose scores were either above the 75^{th} percentile (i.e., in the upper quartile) on the Masculinity scale and below the median on the Femininity scale ("hypermasculine" sex-typing), or in the upper quartile on the Femininity scale and below the median on the Masculinity scale ("hyperfeminine" sex-typing). These two groups were then compared with androgynous participants with regard to their attitudes towards victims. As was expected, the findings were significant, F(2, 111) = 3.94, p < .05. The effect size was moderate (f = .27), and the differences among the means obtained in the analysis of Hypothesis 4 were enhanced. Posthoc analysis using Duncan's multiple range test confirmed that hypermasculine males (M = 56.73, SD = 8.19, n = 13)

rated victims significantly less favorably than hyperfeminine females (M = 69.44, SD = 14.88, n =34). The ratings of androgynous participants (M = 63.84, SD = 15.07, n = 67) did not differ significantly from either group. These results should be interpreted with caution due to the unequal sizes of the groups.

A further interesting supplemental finding was the significant positive correlations obtained between the number of different types of traumatic events reported and scores on the BSRI Masculinity Scale for the sample as a whole, r = .19, p < .01 and for males, r = .21, p < .05, and females, r = .17, p < .05, separately. Participants with a more extensive trauma history scored higher on the BSRI Masculinity scale. For females only, a significant negative correlation was obtained between scores on the BSRI Femininity scale and the average frequency with which traumatic events were experienced, r = -16, p < .05. Women who reported experiencing more frequent trauma scored lower on the BSRI Femininity scale. Analysis of variance established a significant difference among sex-role orientation groups with regard to the total number of different types of traumatic events reported, F(3, 253) = 3.31, p < .05. The effect size was small to moderate (f = .19). Posthoc analysis using Duncan's multiple range test indicated that masculine sex-typed participants (M = 4.96, SD = 3.11, n = 53) reported having experienced a significantly greater number of different types of traumatic events than did participants classified as feminine sex-typed (M = 3.54, SD = 2.58, n = 74), androgynous (M = 3.87, SD = 2.67, n = 67) or undifferentiated (M = 3.65, SD = 2.53, n = 63). This ANOVA was repeated separately for males and females. Among female participants, sex-role orientation groups differed significantly in terms of the total number of different

types of traumatic events reported by participants, F(3, 164) = 3.59, p < .05. The effect size was moderate (f = .25). Again, Duncan's multiple range test revealed that masculine sex-typed participants (M = 5.58, SD = 3.08, n = 24) reported experiencing a significantly greater number of different traumatic events than did feminine sex-typed (M = 3.54, SD = 2.66, n = 67) androgynous (M = 3.77, SD = 2.53, n = 48), and undifferentiated (M = 3.90, SD = 2.60, n = 29) participants. No significant differences among sex-role orientation groups were found for male participants, F(3, 85) = .75, ns, f = .16, although the validity of this finding is limited by the small size of the feminine sex-typed group.

Supplemental analyses were also conducted to explore the relation between the age at which trauma was first experienced by participants and the other variables in the study. These analyses used a subset of 11 items from the THQ that appeared least ambiguous in regard to the traumatic content of the experiences described. This subset of experiences included a break-in while at home (item 4), a serious accident (item 5), a natural or "man-made" disaster where injury or death were feared (items 6 and 7), the murder of a close friend/family member (item 13), death of a partner/child (item 14), rape or other sexual abuse (items 18 and 19), attack with a weapon (item 21), attack without a weapon causing serious injury (item 22), and serious physical abuse within the family (item 23). Female participants (M = 10.61, SD = 5.29) reported experiencing their first traumatic event of those mentioned above at a significantly earlier age than did male participants (M = 12.62, SD = 5.70), t(193) = 2.42, p < .05. Significant correlations with the age at which trauma was first experienced were obtained for the total number of

different traumatic events reported, r = -.23, p < .001, as well as estimated total number of times trauma was experienced by each participant, r = -.20, p = .01. These results indicate that individuals who were younger when they experienced their first traumatic event reported experiencing a greater number of different traumatic events in their lifetime and reported being traumatized more frequently.

Further analyses were performed to determine whether differences existed on the variables of interest in this study between participants who reported a traumatic childhood and those who did not. A traumatic childhood was operationalized as involving the experience of four or more different types of traumatic events before the age of 16 years. It was found that participants who met these criteria (M = 5.14, SD = .56, n = 35) scored significantly higher on the BSRI Masculinity scale than those who did not (M = 4.77, SD = .75, n = 235), t(268) = - 2.76, p < .05. A follow-up analysis was conducted separately for male and female participants. Female participants who reported a traumatic childhood (M = 5.16, SD = .58, n = 25) scored significantly higher on the BSRI Masculinity scale than those did not (M = 4.70, SD = .72, n = 154), t(177) = - 3.04, p < .05. There was no significant difference between male participants with (M = 5.08, SD = .54, n = 10) and without a traumatic childhood (M = 4.91, SD = .80, n = 81), t(89) = - .65, ns. Although no differences were obtained on the BSRI Femininity scale between participants with and without a traumatic childhood, t(268) = 1.84, ns, this analysis was also conducted separately for males and females given the above findings. Female participants who reported a traumatic childhood (M = 4.95, SD = .55, n = 25) scored significantly lower on the BSRI Femininity scale than those who did not (M = 5.23, SD =

.63, n = 154), t(177) = 2.08, p < .05. No difference was obtained for male participants, t(89) = .32, ns. These results should be interpreted with caution due to the unequal and at times small sample sizes.

Although the present study did not include a direct measure of PTSD, the presence of some posttraumatic stress symptoms may be inferred among those participants who indicated that they sought psychological treatment related to the experience of a traumatic event. These participants with "presumptive posttraumatic stress" were compared with participants who reported experiencing one trauma at most and no treatment seeking, on variables related to sex and sex typing, trauma history, and attitudes towards victims. Only one finding emerged as noteworthy: participants with presumptive posttraumatic stress (M = 9.31, SD = 5.41, n = 36) reported experiencing their first trauma at a younger age than those who reported only one traumatic event for which they did not seek treatment (M = 16.61, SD = 3.34, n = 23), t(57) = 5.79, p < .001.

CHAPTER 4

DISCUSSION

In response to epidemiological findings that women are at greater risk than men for developing PTSD after experiencing similar traumas, the present study focused on social evaluations of traumatized men and women as a potential contributor to this gender difference. Specifically, the study explored the independent and combined effects of victim sex, participant sex, participant sex-role orientation and trauma type on college students' attitudes towards hypothetical trauma victims with PTSD. The relation between personal trauma history and attitude toward trauma victims was also examined. Several of the hypotheses of this study were supported; others were not. In this section, each finding will be presented and discussed sequentially. The theoretical and clinical implications of the overall study will then be considered and its limitations will be identified. Finally, directions for future research will be suggested.

Main Hypotheses

A primary hypothesis in the present study was that traumatized men would be subject to more negative social evaluations than traumatized women. This hypothesis was supported: participants rated male victims significantly less favorably than they did female victims of identical types of trauma. As was noted earlier, the experience of victimization and associated reactions of emotional distress and helplessness are highly discrepant with stereotypic masculine traits of agency, mastery and emotional control.

People tend to react negatively when others' behavior violates gender stereotypes (Costrich, Feinstein, Kidder, Marecek & Pascale, 1975; Fiske & Stevens, 1993). The results of this study are similar to the findings cited in the earlier review regarding reactions towards men and women expressing depressive symptoms: participants associated depression with feminine traits (Hammen & Peters, 1978) and were more rejecting of depressed males than depressed females (Hammen & Peters, 1977). The literature on attitudes toward male victims and victims of non-rape trauma is very limited and the few existing studies tend to examine specific reactions such as attributions of blame as opposed to general perceptions. Thus, comparisons of previous findings with the findings of the present study are difficult. However, the present results are similar to those obtained by Krulewitz (1981) who found that female assault victims were generally regarded as more likeable and respectable than male victims.

As was predicted, males in the present study judged all trauma victims more negatively than did females. Female participants may have rated victims more favorably because they were more able to identify with the experience of victimization. Although no significant differences were obtained between men and women in this study with regard to overall exposure to traumatic events, it may be that women in a patriarchal society feel more personally vulnerable to traumatic events given power discrepancies based on gender. Indeed, women's greater fear of crime is well documented, despite the fact that men experience criminal victimization more frequently (Haynie, 1998; Weinrath & Gartrell, 1997). Males may have been less able to identify and empathize with victims due to their greater status and power in society. It should also be noted that female

participants' more positive reaction to victims is also congruent with the sex-role stereotype of women as possessing a high level of caring, nurturant, and empathic attributes; thus, this finding may reflect the impact of this socialization. This result also resonates with some findings from the rape literature that suggest women may be less blaming and more supportive of victims than men (e.g., Deitz & Byrnes, 1978; Kleinke & Meyer, 1990; Best et al., 1992); however, factors uniquely associated with attitudes towards female rape victims may limit the applicability of these findings to the present study.

Based on the findings of a small number of studies indicating interactions between victim sex and perceiver sex in predicting attitudes in regard to situations of victimization (e.g., Howard, 1984b, Krulewitz, 1981; Schneider et al., 1994), the present study explored whether male participants would differentiate more than female participants in their evaluations of male and female victims. Specifically, it was expected that male participants would be more negative in their ratings of male victims than would female participants. This hypothesis was not supported, indicating that male participants regarded victims generally less favorably irrespective of their gender than did female participants. A possible reason for the lack of the expected significant interaction is that the measure of attitudes in the present study was considerably more global than the approaches used in the studies cited above. Krulewitz's (1981) findings regarding a significant interaction between victims and perceiver sex pertained to the evaluation of the strategies of resistance used by male and female assault victims, and degree of identification with the victim. Schneider et al. (1994) measured the amount of blame

attributed by participants to male and female sexual assault victims. Howard's (1984b) findings regarding assault situations were even more specific, involving the relation of victim and participant sex to attributions of behavioral (as opposed to characterological) blame. It may be that this interaction emerges only in regard to particular aspects of attitudes toward victims that were not measured in the present study.

The present study found that combined with sex, participant sex-role attitudes had a significant impact on attitudes towards trauma victims. Feminine females had the most favorable attitudes towards victims, followed by androgynous females, androgynous males, cross-sex-typed females, and then masculine males. These findings highlight the value of attending to the psychological aspects of gender in trying to understand sex differences in attitudes. The largest significant difference obtained was between feminine sex-typed women and masculine sex-typed men, indicating that sex differences were significantly enhanced by identification with stereotypic masculine and feminine traits. Perhaps the most interesting finding was the significant difference obtained between feminine and masculine sex-typed women, indicating the considerable contribution of sex role orientation over and above actual sex to the dependent variable, at least for female participants. Indeed, the ratings of masculine sex-typed females were the closest of all groups to those of masculine sex-typed males. It is unfortunate that the small number of feminine sex-typed men prevented similar comparisons among male participants. Androgynous males were not found to differ in a statistically significantly way from androgynous females, masculine males, or any other group on attitude toward victims; their ratings were closer to those of masculine sex-typed individuals than to those of

androgynous and feminine sex-typed females. The meaning of this finding is unclear. The finding of no significant differences between androgynous and sex-typed males, and between androgynous and sex-typed females suggests that the actual content of masculine versus feminine sex-role attitudes may have had more of an impact on attitudes to victims in this study than the mere presence of sex-typing. The supplementary finding of an enhanced difference between the ratings made by hypermasculine and hyperfeminine participants strengthens these observations regarding the effect of sex-role orientation on attitudes towards victims.

These findings regarding the impact of sex-role attitudes add to the literature indicating that gender role characteristics moderate in complex ways the relation between sex and aspects of emotional functioning, and between sex and attitude toward victims. In this regard, sex-role orientation may operate as a proxy for sex (Brody, 1997) in determining sex differences in these psychological characteristics. As was noted in the earlier literature review, a number of researchers have identified relations between sex-role attitudes and patterns of emotional expressivity (Brody, 1997), and the expression of depressive symptoms in particular (Pidano & Tennen, 1985; Oliver & Toner, 1990). Studies of attitudes towards victims of rape and other crimes indicate that a less stereotyped and more egalitarian sex-role orientation is associated with more favorable attitudes toward victims (Acock & Ireland, 1983; Brems & Wagner, 1994; Howard, 1984b; Krulewitz & Payne, 1978; Quackenbush, 1989; Simonson & Subich, 1999). The findings of the present study were somewhat different in that feminine sex-typing was associated with the most favorable attitudes, and individuals with androgynous sex-role

attitudes were located between feminine sex-typed and masculine sex-typed participants. A possible reason for this difference is that most of the studies cited above involved attitudes towards (primarily female) victims of rape. Social beliefs pertaining to the trauma of rape may elicit attitude differences based on egalitarian versus traditional sex-role orientation; whereas the non-sexual trauma and psychological effects described in the vignettes of this study may elicit attitude differences associated with identification with stereotypic masculine and feminine traits. The one relevant study reviewed that included attitudes towards male victims focused on attributions of blame as an attitudinal measure (Howard, 1984b), making it less directly comparable with the present research.

Related to the above discussion, the hypothesis that sex-congruent sex-typed individuals would differentiate more than androgynous individuals between their ratings of male and female victims was not supported. This hypothesis was based on literature indicating that individuals with traditional sex-role attitudes are less tolerant of gender stereotype violations (Frable, 1989; Lindsay & Zakahi, 1996), and are more constrained by emotional display rules (Kring & Gordon, 1998). Frable (1989) evaluated participants' responses to hypothetical social interactions in which the subject behaved in ways that would be considered inappropriate for his or her sex within American culture. Lindsay and Zakahi (1996) evaluated perceptions of individuals whose behavior deviated from gender stereotypes during initial conversational interactions. Neither of these stimulus situations involved reactions to traumatic events, and it is possible that sex-typing ceases to have an effect when individuals are asked to respond to events that are objectively very stressful and likely to provoke distress in most people. Kring and Gordon's (1998)

findings regarding adherence to display rules pertained to participants' own emotional behavior (specifically, expressiveness in response to emotional stimuli) and may not be directly generalized to evaluations of others' responses.

Gender differences in PTSD prevalence are apparently greater for victims of criminal violence as compared with victims of natural disasters. This finding might be at least partly due to more clearly gendered expectations of behavior and coping in crime victim situations. In the present study, the hypothesis that participants would differentiate more in their ratings of male and female criminal violence victims than in their evaluations of male and female natural disaster victims was supported. However, rather than rating male victims of criminal violence more negatively, participants rated female victims of criminal significantly more favorably than they did other victims. This finding may reflect the impact of extensive efforts to increase public awareness of the problem of violence against women, leading to enhanced empathy for female criminal violence victims. It is also possible that participants believed that female victims would be more likely to fear sexual assault during the attack, rendering the experience more traumatic than for male victims. An unexpected effect was also obtained for trauma type, such that participants evaluated criminal assault victims significantly more positively than natural disaster victims, regardless of their gender. Although efforts were made to ensure the equivalence of the vignettes, it may be that participants viewed a criminal assault as a trauma that is more serious and difficult to overcome than a tornado, and thus regarded victims of this trauma more favorably.

Finally, a significant relation was obtained only for male participants between personal exposure to traumatic events and attitude toward male victims: male participants who had experienced more trauma had more a positive attitude toward male victims. The most likely explanation for this finding is that males with a personal history of victimization were more able to identify and empathize with the experiences of other hypothetical male victims. As was noted earlier, given their less powerful position in society, their greater sense of vulnerability to trauma and violence, and a gender role that embraces caring and empathy, women may be more able to identify with what it is like to be victimized without having to experience it directly.

Additional Findings

The BSRI and sex typing. The BSRI had good internal consistency reliability in the present study, with α coefficients closely corresponding to those reported by Bem (1974). The medians obtained using the present sample were identical to those obtained by Bem in her 1978 normative sample of Stanford undergraduates. The proportions of males and females in each sex-role orientation category were very similar to the original validation sample for female participants (Bem, 1981b). Fewer male participants in the present study were classified as masculine (33% versus 42% in Bem's sample) and more were classified as undifferentiated (38% versus 27% in Bem's sample), whereas the numbers of feminine and androgynous sex-typed men remained fairly similar. This change in proportions may reflect changes over time in the traditional male sex-role, with fewer men identifying themselves with stereotypic masculinity. Hosoda and Stone (2000) note that although the content of gender stereotypes seems to have remained unchanged,

the value attached to stereotypic gender traits appears to be changing, with more unfavorable attributes used to describe men. It is possible that the traditional masculine stereotype has become a less desirable source of identification. It is interesting that this change resulted in a larger number of men being classified as undifferentiated as opposed to androgynous, suggesting perhaps that identification with feminine traits (as would be required for androgynous classification) may still be taboo. Thus, at the same time that there is decreased identification with stereotypic masculine traits, there is no increased identification with feminine traits among them.

Personal trauma histories and treatment seeking. The vast majority of participants (94%) in this study had experienced at least one traumatic event in their lifetime. Not surprisingly, the most frequently experienced event by far was having received news of the serious injury, illness, or unexpected death of someone close. However, even when this item was excluded, 88% of participants reported having experienced at least one traumatic event. Other events experienced by a substantial proportion (at least 30%) of respondents included involvement in a serious accident, robbery, and a natural disaster. The proportions of participants experiencing each event on the THQ generally corresponded closely to those obtained by Green (1996) in her normative college student sample from Washington, DC. In the studies of Bernat et al. (1998) and Vrana and Lauterbach (1994), similarly large proportions of college students reported experiencing a serious accident and a natural disaster. The overall frequency of traumatic events reported in the present study is higher than that reported in the two previous studies. This finding is likely due to measurement/sampling differences, because there is no reason to

believe that students from the university at which the present study was performed have been exposed to more trauma than college students elsewhere. Green (1996) recommends that although the THQ can be used as a self-report measure, follow-up questioning in the context of an interview provides more clear and complete information. It is possible that the present study's lack of a follow-up interview in which responses could be clarified resulted in an elevated rate of endorsing traumatic events.

In the present study, no significant differences were obtained in the mean number of different traumatic events experienced by men and women, the distribution of the number of different traumatic events experienced by gender, and the average number of times that males and females reported experiencing each traumatic event. This finding is at odds with much of the epidemiological literature indicating greater trauma exposure for men than for women (Breslau et al., 1991; Breslau et al., 1999; Kessler et al., 1995; Norris 1992). It is difficult to be certain how to interpret this finding, other than attributing it to sample differences. Participants from the general population studies tend to be at least somewhat older than this college sample, and it is possible that sex differences in exposure emerge more clearly with increasing age. There are very few comparable epidemiological studies involving children and adolescents to allow for further testing of this hypothesis. One very large epidemiological study in North Carolina found that by the age of 16 years, one child in three has already been exposed to an "extreme stressor" as defined by DSM-IV, with no difference in overall exposure between males and females (Costello, 2000, November). However, it should be noted that

contrary to the results of the present study, Vrana and Lauterbach (1994) found that college males reported greater exposure to traumatic events than college females.

As would be expected based on the epidemiological studies reviewed earlier, several important sex differences were found with regard to the frequency with which specific traumatic events were experienced. Predictably, female participants reported significantly greater exposure to all types of sexual trauma. The frequency with which forced sexual intercourse and sexual touching were reported was alarmingly high, with almost one quarter of female participants reporting such forms of forced sexual contact. The prevalence with which forced sexual intercourse was reported in the present study is similar to that described in some other studies of college students (Koss, Gidycz, & Wisniewski, 1987; Vrana & Lauterbach, 1994) and is considerably higher than that found in general population studies (Breslau et al., 1991; Kessler et al. 1995; Norris, 1992; Resnick et al., 1993). The higher prevalence of sexual trauma in this study as compared with the general population may be due to a number of factors, including differences in the way in which items about rape and sexual assault are worded across studies (Acierno et al., 1999), the self-report format of this study as compared with the interview format of the large epidemiological studies, and the fact that college students are a high-risk group based on their age (Koss et al., 1987).

Women were also more likely to report having experienced the life-threatening illness, serious injury, or unexpected death of someone close. This finding is interesting, given that there is no reason to expect that these events occur more frequently in the lives of women than men. It is possible that these events may be more salient for women given

the greater emphasis placed on relationships in female socialization; they may thus be more likely to recall or report them.

Men were significantly more likely to report having experienced a mugging than women. Their greater exposure to this event may be a result of greater precautions taken by women with regard to their personal safety (for example, by avoiding high-crime areas or not walking alone at night). Male participants were also more likely to report having seen or handled dead bodies. An examination of specific responses to this item suggests that these experiences occurred most commonly in the context of car accidents, working at a hospital or morgue, or witnessing the deaths of family members. It may be that men are likely to initiate more active involvement or take on particular roles in these situations.

A supplementary finding of the present study was that women reported experiencing their first traumatic event at a significantly earlier age than men. There are few studies that report comparable information about the ages at which traumatic events are reported to have been experienced. Breslau et al (1997) found that similar proportions of men and women who reported lifetime exposure to traumatic events dated their earliest exposure at age 15 years or earlier. They found differences in the types of traumatic events most frequently experienced in childhood, with a higher proportion of women reporting exposure to rape, assault or ongoing physical or sexual abuse, and a higher proportion of men reporting exposure to serious accidents or injury. It is possible that the traumatic events that girls are most likely to experience in childhood typically occur at an earlier age than the events that are more likely to be experienced by boys.

It was also found that individuals who were younger when they experienced their first traumatic event reported experiencing a greater number of different traumatic events in their lifetime as well as more frequently repeated traumatic experiences. This finding is consistent with the observation that has often been made in the literature that traumatized individuals, and particularly survivors of childhood abuse, are at increased risk for repeated victimization on future occasions (Herman, 1992b; van der Kolk, 1996). For example, in a large prospective study, Kilpatrick et al (1993) found that risk of new rape or aggravated assault increased from 2.1% in women with no prior victimizations to 11.9% and 10.8% in women with one or two prior exposures respectively, and jumped to 23% in women with a history of three or more prior experiences of victimization. This process has often been understood as a complex form of behavioral reenactment in an effort to gain mastery over the original trauma, based on Freud's (1922/1955) concept of the "repetition compulsion". More recent theorists have also conceptualized such reenactments, along with other intrusive symptoms, as spontaneous attempts to integrate the traumatic event cognitively and emotionally (Herman, 1992a). A simpler situational explanation for this finding may be differences in the environments in which participants were raised, with some growing up in households or neighborhoods in which trauma is more endemic.

The present study found that women who reported having experienced at least one traumatic event were significantly more likely than their male counterparts to seek related psychological treatment. This is not surprising given established findings documenting gender differences in help seeking for psychological problems (Bland, Newman & Orn,

1997; Johnson, 1988; O' Neil, Lancee & Freeman, 1984). Different patterns of help seeking most likely reflect the effect of gender stereotypes, which permit women to express their emotions and seek support but expect men to suppress their feelings and deal with their experiences on their own. An alternative explanation for this finding is that men were less distressed by their traumatic experiences. The present study did not include a measure of psychological symptoms; thus, the potential contribution of symptom severity could not be evaluated.

Although no direct measure of posttraumatic stress reactions was included in the present study, in a supplemental analysis, participants who reported seeking psychological help related to the experience of a traumatic event were designated as having "presumptive posttraumatic stress". It was found that these participants reported experiencing their first trauma at a younger age than those who had experienced only one traumatic event for which they did not seek treatment. This finding suggests that experiencing trauma at an earlier age may be associated with the development of more severe reactions, or more specifically with an increased likelihood of receiving treatment. However, participant sex was a confounding factor in this analysis as participants who sought help in the present study were most likely to be women, and women also reported experiencing earlier trauma than men.

Sex typing and trauma variables. The finding that masculine sex-typed participants (particularly masculine sex-typed females) report having experienced a greater number of traumatic events than participants with other sex-role orientations has a number of possible interpretations, especially given that the direction of any causal relation cannot

be determined based on the available data. Firstly, masculine sex-typed individuals may experience more traumatic events because they are more likely to engage in activities or assume roles that increase their risk of exposure to trauma. Alternatively, masculine sex-typed individuals may be more inclined than others to report the traumatic events that they have experienced. A third and especially intriguing possibility is that experiencing traumatic events contributes to the development of a masculine sex-role orientation in women in particular. It is possible that women who are repeatedly victimized respond by identifying themselves with aspects of masculine sex typing to reduce feelings of helpless and vulnerability that may be exacerbated by feminine sex-role identification. Lisak (1994) noted that a proportion of his sample of sexually abused men reinforced their denial of feelings of vulnerability and helplessness associated with their victimization by taking on hypermasculine attributes and dispositions that were much more expressive of their anger. The impact of the experience of trauma on the sex-role orientation of women is poorly understood and is an area worthy of further investigation. Support for a developmental explanation of the relation between trauma exposure and sex typing may be derived from the additional finding that female participants who met criteria for a traumatic childhood (i.e., experienced four or more different traumas before the age of 16 years) scored significantly higher on the BSRI Masculinity scale and significantly lower on the BSRI Femininity scale than those who did not. Once again, however, the direction of any causal relation is not known; thus, it is also possible that masculine sex typing contributes to exposure to traumatic events in childhood among girls or is associated with increased reporting of these events.

The present study found no significant relation between sex-role orientation and psychological help seeking in relation to trauma. This result is contrary to what might be expected based on Johnson's (1988) findings that feminine sex-typed and androgynous individuals are more willing to recognize a personal need for help, and feminine sex-typed individuals are more confident in professionals' ability to help with personal problems. The comparability of this study with Johnson's (1988) study is limited by the fact that the former focused on help-seeking behavior, whereas the latter dealt with help-seeking attitudes.

Theoretical and Clinical Implications

Theory of gender and PTSD

The present study represents one of the first steps towards understanding the potential contribution of social beliefs and expectations about gender to the observed sex differences in PTSD prevalence. The findings of this research confirmed that male trauma victims experiencing psychological symptoms receive less social approval than female victims. Gender stereotypes have prescriptive qualities (Fiske & Stevens, 1993). People react negatively to individuals who violate gender stereotypes and positively towards those who conform to them. Violating gender-emotion stereotypes presents risks to peer popularity, sexual attractiveness, the quality of interpersonal relationships, and self-image (Brody, 1997). Gender stereotypes may influence emotional behavior through socialized adherence to display rules (Brody, 1985). From this standpoint, men may be less inclined than women to acknowledge and express symptoms of emotional distress following a trauma. Alternatively, men's reactions to trauma may be expressed in ways that are different to those typically evaluated in PTSD studies. Green

and Lindy (1994) noted that traumatized women tend to report more symptoms of PTSD, anxiety, and depression, whereas traumatized men are more likely to abuse alcohol, report physical or somatic complaints, and have symptoms related to hostility or acting out behavior. Similarly, some differences have been noted in the kinds of depressive symptoms typically experienced by men and women (Frank et al., 1988; Vredenburg et al., 1986). At the same time as minimizing the experience of male victims and discouraging their expressions of emotional pain, society may display greater acceptance of female victims (at least of non-sexual trauma) and permit, perhaps even encourage, their expression of vulnerability and distress. In the present study, this tendency was reflected in the significantly more positive attitude expressed by participants towards female criminal assault victims in particular. These social attitudes and the complex ways in which they become part of the individual's psychology may translate into sex differences in PTSD prevalence.

The present study confirmed that the ways in which people have internalized social beliefs about gender (i.e., the nature of sex-typing) have a significant impact on their responses to traumatized individuals, with masculine sex-typing associated with less sympathetic attitudes, regardless of actual sex. The ways in which these attitudes may affect individuals' feelings about their own traumatic experiences and responses have yet to be explored, as factors related to sex-typing have been given virtually no direct attention in the trauma literature as potential mediators of posttraumatic reactions. The findings of this study illustrate how an understanding of sex differences in psychological variables can be enriched by going beyond a view of sex as a binary characteristic toward

an understanding that incorporates the internalized social beliefs and expectations that form the experience of gender. Sex alone does not have explanatory power; rather, it is the myriad of associated biological, psychological, and sociocultural attributes that give meaning to observed sex differences in attitudes and behavior. Although this point may appear self-evident, it is frequently overlooked in studies that reduce differences obtained between men and women to "sex differences".

Clinical interventions. Clinically, the findings of this study suggest that mental health practitioners working with trauma victims should be aware of the types of social reactions and messages received by their male and female clients, and how gender stereotypes may affect the traumatized person's own interpretation of his or her reaction. This study suggests that males are less likely to seek treatment in relation to a traumatic event. This reluctance is likely at least partly because they experience their victimization and distress as less legitimate and socially acceptable. Given that they are also less likely to receive social approval, male victims may feel more alone and isolated in coping with their reactions. Throughout the literature on stress and trauma, social support and connectedness has been identified as an important ameliorative factor (Cohen & Wills, 1985; van der Kolk, McFarlane & van der Hart, 1996). Sewell and Williams (2001) go further to propose that a disruption in social processes represents a central effect of many traumatic experiences. Male trauma victims may thus avoid exposing their vulnerability and seeking help for fear of social censure, but as result, they may be unable to access some of the benefits derived from connecting with others.

The present study highlights the importance of attending to gender-related issues in trauma treatment, and conceptualizing interventions in a gender-sensitive way. Based on the findings of this study, it is recommended that clinicians incorporate in their assessment of traumatized clients an appraisal of their gender role orientation. This facet of gender identity may have important implications for trauma victims' feelings about themselves and their emotional reactions. Such an understanding may lead to more sensitive tailoring of interventions and more effective treatment. Studies have suggested that therapists' cultural sensitivity and culturally-responsive forms of treatment enhances psychotherapy with clients of diverse ethnic backgrounds (Sue, Zane & Young, 1994). Paying attention to the cultural aspects of gender may further enhance clients' willingness to engage in, and capacity to benefit from, psychotherapeutic treatment.

Lisak (1994) noted that male gender norms may inhibit the internal psychological processes that are necessary for healing from trauma. This is because the gender norms dictate that "appropriately masculine" men do not acknowledge and certainly do not express their pain, vulnerability, helplessness or other affective sequelae other than anger. Based on cognitive dissonance between gender-related and trauma-related cognitions, males may be inclined to deny or minimize the impact of trauma or victimization (Saxe & Wolfe, 1999). Male clients who identify with these norms may experience a sense of shame regarding their emotional reactions, making their exploration in therapy difficult. This is particularly relevant in posttraumatic therapy in which connecting affectively with the traumatic experience is a key component of treatment. Reexperiencing traumatic memories in a safe and controllable environment is often seen as a necessary component

of the deconditioning of posttraumatic responses. There is increasing evidence that once all relevant elements of the total traumatic experience have been identified and thoroughly examined and experienced in therapy, successful synthesis can take place (van der Kolk, McFarlane & van der Hart, 1996). It may be that male clients who identify with traditional male gender norms require more education about the value of this process than female clients in order to counter resistance to this therapeutic approach.

Information giving is a very important component of posttraumatic treatments. Giving clients a cognitive structure for understanding their reactions helps them to gain a greater sense of control over their intrusive and avoidant symptoms, and to begin to pursue issues of meaning (Turnbull & McFarlane, 1996). Such interventions typically involve providing clients with psychoeducation about the effects of trauma and the process of recovery. It may be that this component requires greater emphasis and attention with masculine sex-typed clients, as well as specific acknowledgement of the challenge that the traumatic experience poses to beliefs about masculinity.

A common effect of victimization is that it results in the challenging of key assumptions about the self and the world. McCann and Pearlman (1990) identified five basic schemas that are disrupted by trauma: safety, trust, power, esteem and intimacy. Such mental schemata organize psychological experience via the processes of assimilation and accommodation, and assure continuity of identity. Modification of one's view of self and others (accommodation) is important for adaptive resolution to a traumatic experience; however, it is necessary not to generalize from that experience to the totality of existence (over-accommodation) (van der Kolk et al, 1996). In information-

processing terms, “the therapist’s job is to assist with the integration of the traumatic event, with complete processing of emotions and accommodation of schemata, while helping the client maintain or achieve a healthy outlook, a balanced perception of the world.” (Resick & Schnicke, 1996, p. 12). Trauma might impact differently on the five basic schemas based on gender and sex-role orientation. For example, challenges to the schema of power may be experienced very differently by individuals with a masculine, feminine, or androgynous sex-role orientation. It may thus be important for therapists to be aware of the ways in which schemas regarding gender may overlap or interact with the schemas of self that are likely to be affected by trauma.

A further important clinical implication of this study is its relevance to public education about trauma and posttraumatic reactions. Mass disasters are often followed by the distribution of information through the media about trauma and its effects. For example, in response to the recent terrorist attacks in New York and Washington, DC, organizations such as the American Psychological Association (2001) and the International Society for Traumatic Stress Studies (2001) have published a list of posttraumatic reactions on the internet. The present study suggests that it may be helpful for such efforts to address directly some of the assumptions that people commonly make about male and female trauma victims (for example, that men should not be emotionally vulnerable) with the aim of normalizing reactions and increasing the support available to traumatized people. If the interpretation is correct that the finding of more favorable attitudes towards females victims of criminal assault reflects the impact of public education efforts regarding violence towards women, such interventions may also have a

powerful impact on attitudes towards other classes of victims. This research also suggests that males and masculine sex-typed individuals tend to be less supportive of victims, and may be important target groups for psychoeducational efforts. One way of promoting empathy and support for victims may be to encourage identification. For example, it may be useful to describe "macho" individuals who are exposed to trauma and experience distress, or provide information in a way that enables recipients to access experiences in which they have felt or behaved in ways counter to gender-role stereotypes.

Limitations of this Study

The present study has a number of limitations, the most important of which pertain to its external validity or generalizability beyond the conditions of this experiment to other populations, settings and conditions (Kazdin, 1998). This study used vignettes containing limited information about hypothetical protagonists to assess reactions towards these individuals. The extent to which participants would reason in a similar way about real others and about their own emotional reactions is open to question. Studies by Robinson, Johnson, and Shields (1998) suggest that people tend to rely on gender stereotypes as a heuristic when they lack a database of concrete situational experiences on which to base their judgments. They found that gender-emotion stereotypes had a significant impact on participants' judgments of their own and others' emotions while watching or playing a game in a hypothetical condition but not in an actual condition. Participants rating the emotions of hypothetical others were also significantly more likely to employ gender stereotypes than participants rating their own emotional state. Similarly, Locksley, Borgida, Brekke, and Hepburn (1980) found that the effects of

gender stereotypes on participants' judgments about a hypothetical target person were eradicated when more individuating or diagnostic behavioral information about the target was provided. These studies suggest that people may rely considerably less on gender stereotypes when evaluating their own emotional responses and the responses of others about whom they have extensive information. A further factor limiting the generalizability of the present research was the use of college students as participants. College students are younger than the general population, and may be more enlightened with regard to their beliefs about gender roles. It is therefore possible that different strengths or patterns of findings may have emerged had a different sector of the population been evaluated.

Limitations of the present study also include measurement problems. Based on the way the vignettes in this study were constructed, it was unclear whether participants were responding to the protagonists' experiences of victimization or to the fact that they developed posttraumatic stress symptoms. A design that varied not only protagonist sex and trauma type but also whether or not protagonists became symptomatic would have allowed for assessment of this issue. Although the continued validity of the BSRI is supported by some research (e.g., Holt & Ellis, 1998), other studies raise concerns about its use given changes in perceptions of masculinity and femininity that have taken place in American society since the early 1970's. For example, Auster and Ohm (2000) used the same procedure employed by Bem in her original study to determine whether the desirability ratings of the masculine and feminine traits that comprise the BSRI are still valid, and to evaluate the extent to which desirability ratings of the masculinity and

femininity traits may have changed over time. They found that 18 out 20 feminine traits still qualified as feminine, but only 8 of 20 masculine traits still qualified as masculine. Assessment of the extent of change in the mean desirability ratings of masculine and feminine traits from 1972 to 1999 indicated some changes in respondents' evaluation of the traits "for a man" and greater change in their evaluation of the traits "for a woman". Similarly, Hoffman and Borders (2001) asked college students to rate the original BSRI items as masculine, feminine or neutral. They found that only the descriptors "masculine" and "feminine" could be consistently classified as masculine and feminine, respectively. In regard to more general concerns about what is being measured by the instrument, Spence (1993) has argued that instruments such as the BSRI and PAQ are measures of the socially desirable aspects of instrumentality and expressiveness, and not of broad gender concepts such as Masculinity-Femininity, sex-typing or gender schematization. Finally, as was noted earlier, the use of the THQ may have inflated the number of participants who were identified as having experienced a trauma. The population of relevant events included in the THQ is broader than most other measures, particularly because it includes deaths and illnesses of significant others. Green chose this strategy because in her research, participants who provided affirmative responses were interviewed in more detail about their experiences (Norris & Riad, 1997). The present study might have reduced the rate of traumatic event endorsement by including a follow-up interview, although this approach would have been more time-consuming and would likely have resulted in a smaller sample size. Alternatively, another measure could have

been chosen with a more narrowly defined population of events; however, it is likely that liberal endorsement would be elicited by any measure designed for screening purposes.

Directions for Future Research

Based on the findings of the present study, a logical next step in coming closer to an understanding of gender differences in PTSD prevalence would be to explore more directly the relation between gender-role orientation and posttraumatic stress symptomatology. Similar studies have already been conducted focusing on depressive symptoms (Oliver & Toner, 1990; Pidano & Tennen, 1985). This research would best be conducted using a sample in which all participants had experienced a similar traumatic event in order to reduce potential variability due to different trauma types. Participants' gender-role orientation could be assessed using the BSRI or a similar instrument. Posttraumatic stress and other types of symptoms could be evaluated using a multimethod approach, including the administration of self-report questionnaires and a structured or semi-structured interview. As has been noted, methodological factors have been associated with different PTSD prevalence estimates, and with gender differences in prevalence. The use of multiple measures would allow for an examination of the relation between gender-role orientation and posttraumatic symptoms using different methodologies. Some way of assessing the participants' level of trauma exposure should be included as this factor may moderate the relation between gender-role orientation and PTSD. A well-designed study would include some measurement of symptoms at different intervals post trauma, given that the time of assessment may affect prevalence estimates. The relation between gender-role orientation and posttraumatic symptoms can then be

examined statistically. This proposed study shares a potential weakness with most trauma research in that there would be no data regarding gender-role orientation prior to trauma exposure. Although it may be argued that gender-role orientation reflects relatively stable traits, it is also possible that trauma exposure impacts individuals' beliefs about their gender identity just as it does other aspects of their self-concept and view of the world. In the present study, this idea was indirectly supported by the significant relation between personal trauma exposure and sympathy for male victims among male participants. The finding of a significant association between trauma exposure and masculine sex typing among women in particular also raises questions about the direction of any causal relation between traumatic experiences and gender-role orientation. Without information about gender-role orientation prior to trauma exposure, it is difficult to form firm conclusions about gender-role orientation as an enduring component of personality organization that affects the expression of symptoms. One potential way to address this problem would be to ask participants to complete the gender-role measure twice, reporting both their present gender-role orientation and recalling their gender-role orientation prior to the time of the traumatic event. Although this approach has problems related to the accuracy of retrospective self-report, it could provide some way of investigating and controlling for changes in gender-role orientation as a result of trauma exposure. An alternative approach would be to use a prospective design involving at-risk persons such as emergency workers, police officers or 911 responders. Ideally, participants would be assessed for the first time during their training, prior to exposure to the multiple traumas that they are likely to encounter in their work. They could then be

reassessed at regular intervals as they accumulate experience on the job. A possible shortcoming of this approach is that participants from such groups may have somewhat less variability in their gender-role characteristics than the general population (for example, they may be less likely to embrace a typically feminine gender-role).

A further useful extension of the present study would be to investigate whether similar factors affect the attitudes of mental health professionals towards traumatized patients. Such attitudinal biases may indirectly affect prevalence estimates by impacting rates of PTSD diagnosis. One study of interviewer effects on PTSD diagnosis found that female interviewers had a lower threshold for diagnosing PTSD than male interviewers (Grayson et al., 1996). Studies reviewed earlier indicated that gender-role stereotypes may affect the thinking and behavior of counselors and therapists (Heesacker et al., 1999; Robertson & Fitzgerald, 1990). These issues could be evaluated by having mental health professionals or trainees observe a videotaped "client" talking about his or her recent experience of victimization and/or posttraumatic stress symptoms. The observers could then be asked to evaluate the client's symptoms and arrive at a diagnosis, as well as formulate a plan for treatment. Similar data regarding the mental health professionals' sex, gender-role attitudes, and personal trauma history may be helpful in understanding factors influencing their judgments.

The present study began to explore a social-cognitive explanation for the observed gender differences in PTSD prevalence. As was noted in the earlier literature review, a variety of theoretical hypotheses as well as methodological explanations have been advanced to account for these gender differences, although few have received any

systematic study. As is true for most complex psychological phenomena, multiple factors likely contribute to these gender differences.

There is a great need for research testing other theoretical explanations; for example, the hypothesis that women may be more vulnerable to trauma (and interpersonal trauma in particular) because trauma affects relatedness to others and relationships are more closely tied to women's sense of self (Saxe & Wolfe, 1999) should be studied. The psychobiology of PTSD is an area of burgeoning research. More studies are needed involving both male and female participants to understand the potential contribution of biological factors to sex differences in prevalence. Research examining the interaction of gender with other aspects of identity such as socioeconomic status, age, race and ethnicity, health status, and care-taking responsibilities would be helpful in understanding the social creation of psychological vulnerability to trauma. In addition, further studies investigating the role of methodological factors may clarify at least some sources of the observed gender differences, as well as the reason for inconsistent findings across studies with regard to particular types of trauma. In this latter regard, meta-analytic approaches such as was used by Brewin et al. (2000) may be helpful in determining which study and sample characteristics are associated with the strongest effects. The accumulation of research findings in each of these areas will ultimately lead to a richer and more comprehensive understanding of the gender differences in PTSD prevalence.

APPENDIX A

CONSENT FORM

RESEARCH CONSENT FORM – PARTICIPANT'S COPY

Please detach and keep this form.

Title of Study: Social Reactions to Stressful Experiences
Principal Investigator: Kenneth W. Sewell, Ph.D.
Co-Investigator: Michaela Mendelsohn, M.A.

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and discomforts of the study. It also describes the alternative treatments that are available to you and your right to withdraw from the study at any time. It is important for you to understand that no guarantees or assurances can be made as to the results of the study.

The purpose of this study is to explore reactions to people who have been involved in various types of stressful experiences. The study will also examine some of your attitudes and personal experiences, in an attempt to discover some of the factors that may influence reactions towards others. Your participation will take approximately one hour of your time on one occasion. You will be asked to read short vignettes or stories about people who have been involved in various stressful experiences. You will then be asked some questions regarding your opinions about these people. You will also be administered two other questionnaires, one regarding social attitudes and another regarding events which you may or may not have experienced. You will be asked some basic questions about your age, sex, and racial and ethnic background.

Participation in this research will take approximately one hour of your time. It is possible that reading about others' stressful experiences may cause you to feel uncomfortable. It is also possible that you may experience some discomfort when asked about negative events that you may have experienced in the past. There are no foreseeable risks associated with these procedures.You will obtain extra credit for your participation in this study. Through your participation, you may gain some insight into your own attitudes and reactions. This study will help us to understand the nature of the social reactions experienced by people who have had different types of stressful experiences. This may help us in planning more effective public education, as well as psychological interventions for people who have had such experiences.

Consent forms will be detached from questionnaire packages once the data is collected and will be stored separately. This means that your name will not be connected with your responses and that you cannot be personally identified.

This research study has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (940) 565-3940.

RESEARCH SUBJECTS' RIGHTS: I have read or have had read to me all of the above.

The researcher has explained the study to me and answered all of my questions. I have been told the risks or discomforts and possible benefits of the study. I have been told of other choices available to me. I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw at any time without penalty or loss of benefits to which I am entitled. The study personnel can stop my participation at any time if it appears to be harmful to me, if I fail to follow directions for participation in the study, if it is discovered that I do not meet the study requirements, or if the study is canceled. In case there are problems or questions, I have been told I can call Dr. Kenneth Sewell at telephone number (940) 565-2671 or Michaela Mendelsohn at (972) 459-5232.

I understand my rights as a research subject, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done. I will receive a copy of this consent form.

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONS

Please answer the following questions:

Age: _____

Sex (please circle): M F

Ethnicity: _____

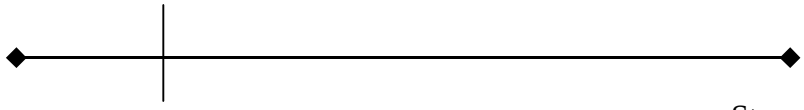
APPENDIX C

ATTITUDES TOWARD VICTIMS VIGNETTES

INSTRUCTIONS

Please read the stories on the pages that follow and respond to the questions after each story. Indicate your opinion by making a single mark on the line after each question.

For example:



Strongly Disagree Strongly Agree

- In some cases, you may feel that you do not have enough information to make a confident judgment. **Please make your best judgment anyway, based on your impression of the story.**

- Please try to think about each story and question individually **without thinking about how you may have rated other questions on the same or other stories.**

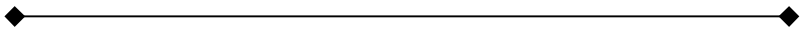
- If you are following the above instructions, your ratings will likely vary for different questions and stories.

Bob is walking to his car after running some errands. He is approached by a man who begins verbally insulting him. Bob walks quickly toward a busy intersection but the stranger catches up with him. The man suddenly pulls out a knife and roughly pushes Bob into a deserted alley. He holds the knife to Bob's throat and threatens to kill him if he does not hand over his wallet and watch. Bob can feel the blade of the knife pressing against his skin as he reaches for his wallet. After grabbing his possessions, the man pushes Bob to the ground and proceeds to kick him several times. The man then runs off, leaving Bob sprawled on the ground.

Two months later, Bob's minor cuts and bruises have healed but he cannot stop thinking about the mugging. He has vivid nightmares in which the attack is repeated and he becomes very distressed if he reads about criminal violence in the newspaper. He avoids the area in which the mugging occurred, and sometimes feels afraid to go out at all. He feels continually "jumpy" and unable to relax.

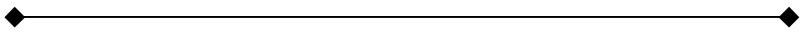
Based solely on what you have read about Bob, form a picture in your mind of him as a person. Then answer the following questions regarding your feelings about Bob. Don't worry about the <u>accuracy</u> of your responses; just respond according to your feelings toward Bob as you picture him.

In general, Bob is:



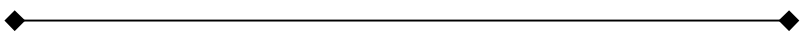
Not at all competent Very competent

In general, Bob is:



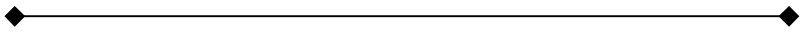
Very intelligent Not at all intelligent

As a friend, Bob is:



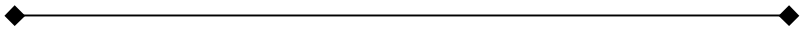
Not at all likable Very likable

To potential romantic partners, Bob is:



Very attractive Not at all attractive

Generally, how do you feel about Bob?



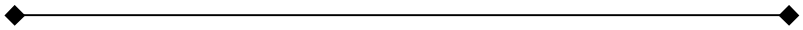
Very negatively Very positively

Mary is at home when she hears thunder and strong winds outside. Heavy rain starts to fall and Mary goes to the front of the house to shut the windows. As she looks out, she sees a dark cloud with a swirling funnel bearing down on the dirt road towards her house. Mary runs to a closet but before she has taken a few steps, the roar of the tornado becomes deafening and she hears glass breaking. She dives under a table and covers her head. She feels the house shaking around her as the wind and rain drive in through the broken windows, and she feels the impact of fragments of glass and debris cutting against her skin. She remains crouched under the table in fear of her life until the roar and shaking subsides.

Two months later, Mary's minor cuts and bruises have healed but she cannot stop thinking about the tornado. She becomes very distressed whenever she hears thunder or rain, and has vivid memories in which she can almost hear the roar of the tornado and the shattering of glass. She does not want to discuss the event with others and avoids being alone at home. She has difficulty concentrating and is easily startled by loud noises.

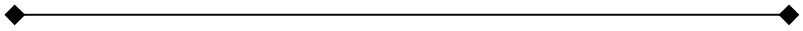
Based solely on what you have read about Mary, form a picture in your mind of her as a person. Then answer the following questions regarding your feelings about Mary. Don't worry about the <u>accuracy</u> of your responses; just respond according to your feelings toward Mary as you picture her.

In general, Mary is:



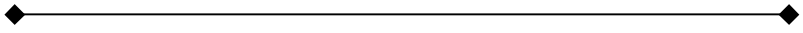
Not at all competent Very competent

In general, Mary is:



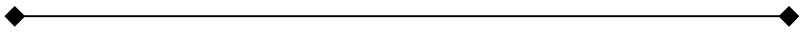
Very intelligent Not at all intelligent

As a friend, Mary is:



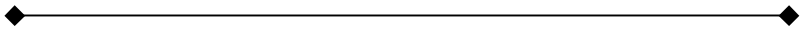
Not at all likable Very likable

To potential romantic partners, Mary is:



Very attractive Not at all attractive

Generally, how do you feel about Mary?



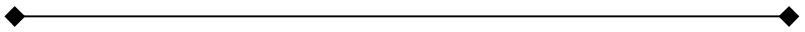
Very negatively Very positively

Julie is walking to her car after running some errands. She is approached by a man who begins verbally insulting her. Julie walks quickly toward a busy intersection but the stranger catches up with her. The man suddenly pulls out a knife and roughly pushes Julie into a deserted alley. He holds the knife to Julie's throat and threatens to kill her if she does not hand over her purse and jewelry. Julie can feel the blade of the knife pressing against her skin as she removes her jewelry. After grabbing her possessions, the man pushes Julie to the ground and proceeds to kick her several times. The man then runs off, leaving Julie sprawled on the ground.

Two months later, Julie's minor cuts and bruises have healed but she cannot stop thinking about the mugging. She has vivid nightmares in which the attack is repeated and she becomes very distressed if she reads about criminal violence in the newspaper. She avoids the area in which the mugging occurred, and sometimes feels afraid to go out at all. She feels continually "jumpy" and unable to relax.

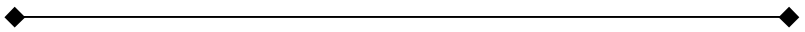
Based solely on what you have read about Julie, form a picture in your mind of her as a person. Then answer the following questions regarding your feelings about Julie. Don't worry about the <u>accuracy</u> of your responses; just respond according to your feelings toward Julie as you picture her.

In general, Julie is:



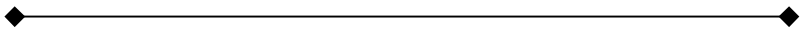
Not at all competent Very competent

In general, Julie is:



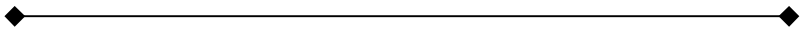
Very intelligent Not at all intelligent

As a friend, Julie is:



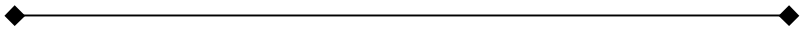
Not at all likable Very likable

To potential romantic partners, Julie is:



Very attractive Not at all attractive

Generally, how do you feel about Julie?



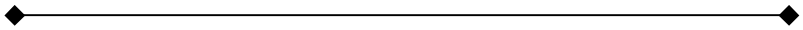
Very negatively Very positively

Mike is at home when he hears thunder and strong winds outside. Heavy rain starts to fall and Mike goes to the front of the house to shut the windows. As he looks out, he sees a dark cloud with a swirling funnel bearing down on the dirt road towards his house. Mike runs to a closet but before he has taken a few steps, the roar of the tornado becomes deafening and he hears glass breaking. He dives under a table and covers his head. He feels the house shaking around him as the wind and rain drive in through the broken windows, and he feels the impact of fragments of glass and debris cutting against his skin. He remains crouched under the table in fear of his life until the roar and shaking subsides.

Two months later, Mike's minor cuts and bruises have healed but he cannot stop thinking about the tornado. He becomes very distressed whenever he hears thunder or rain, and has vivid memories in which he can almost hear the roar of the tornado and the shattering of glass. He does not want to discuss the event with others and avoids being alone at home. He has difficulty concentrating and is easily startled by loud noises.

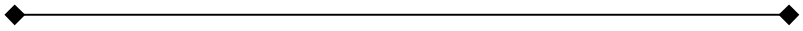
Based solely on what you have read about Mike, form a picture in your mind of him as a person. Then answer the following questions regarding your feelings about Mike. Don't worry about the <u>accuracy</u> of your responses; just respond according to your feelings toward Mike as you picture him.

In general, Mike is:



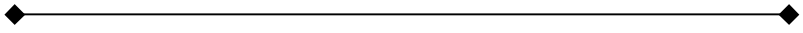
Not at all competent Very competent

In general, Mike is:



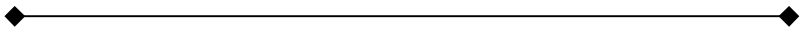
Very intelligent Not at all intelligent

As a friend, Mike is:



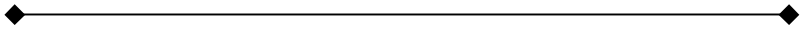
Not at all likable Very likable

To potential romantic partners, Mike is:



Very attractive Not at all attractive

Generally, how do you feel about Mike?



Very negatively Very positively

APPENDIX D

TRAUMA HISTORY QUESTIONNAIRE

TRAUMA HISTORY QUESTIONNAIRE

The following is a series of questions about serious or traumatic life events. These types of events actually occur with some regularity, although we would like to believe they are rare, and they affect how people feel about, react to, and/or think about things subsequently. Knowing about the occurrence of such events, and reactions to them, will help us to develop programs for prevention, education, and other services. The questionnaire is divided into questions covering crime experiences, general disaster and trauma questions, and questions about physical and sexual experience.

For each event, please indicate (circle) whether it happened, and if it did, the number of times and your approximate age when it happened (give your best guess if you are not sure). Also note the nature of your relationship to the person involved, and the specific nature of the event, if appropriate.

Crime-Related Events

			If Yes	
			# of Times	Approx. Age
1. Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?	No	Yes	_____	_____
2. Has anyone ever attempted to rob you or actually robbed you (i.e. stolen your personal belongings)?	No	Yes	_____	_____
3. Has anyone ever attempted to or succeeded in breaking into your home when you weren't there?	No	Yes	_____	_____
4. Has anyone ever tried to or succeeded in breaking into your home while you <u>were</u> there?	No	Yes	_____	_____

General Disaster and Trauma

5. Have you ever had a serious accident at work, in a car or somewhere else?	No	Yes	_____	_____
<u>If yes</u>, please specify				
_____				

				If Yes # of Times	If Yes Approx. Age
6.	Have you ever experienced a natural disaster such as a tornado, hurricane, flood, major earthquake, etc., where you felt you or your loved ones were in danger of death or injury? If yes, please specify _____	No	Yes	_____	_____
7.	Have you ever experienced a "man-made" disaster such as a train crash, building collapse, bank robbery, fire, etc., where you felt you or your loved ones were in danger of death or injury? If yes, please specify _____	No	Yes	_____	_____
8.	Have you ever been exposed to dangerous chemicals or radioactivity that might threaten your health?	No	Yes	_____	_____
9.	Have you ever been in any other situation in which you were seriously injured? If yes, please specify _____	No	Yes	_____	_____
10.	Have you ever been in any other situation in which you feared you might be killed or seriously injured? If yes, please specify _____	No	Yes	_____	_____
11.	Have you ever seen someone seriously injured or killed? If yes, please specify who _____	No	Yes	_____	_____
12.	Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason? If yes, please specify _____	No	Yes	_____	_____

			If Yes # of Times	If Yes Approx. Age
13. Have you ever had a close friend or family member murdered, or killed by a drunk driver? If yes, please specify relationship (e.g.mother, grandson,etc.)_____	No	Yes	_____	_____
14. Have you ever had a spouse, romantic partner, or child die? If yes, please specify relationship_____	No	Yes	_____	_____
15. Have you ever had a serious or life-threatening illness? If yes, please specify _____	No	Yes	_____	_____
16. Have you ever received news of a serious injury, life-threatening illness or unexpected death of someone close to you? If yes, please indicate nature of event and relationship _____ _____	No	Yes	_____	_____
17. Have you ever had to engage in combat while in military service in an official or unofficial war zone? If yes, please indicate where. _____	No	Yes	_____	_____

Physical and Sexual Experiences

			If Yes Was it repeated?	If Yes Approx. how often & what Age(s)
18. Has anyone ever made you have intercourse, oral or anal sex against your will? If yes, please indicate nature of relationship with person (e.g. stranger, friend, relative, parent, sibling)_____	No	Yes	_____	_____

			If Yes	
			Was it repeated?	Approx. how often & what Age(s)
19. Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat? If yes, please indicate nature of relationship with person (e.g. stranger, friend, relative, parent, sibling) _____	No	Yes	_____	_____
20. Other than incidents mentioned in Questions 18 and 19, have there been any other situations in which another person tried to force you to have unwanted sexual contact?	No	Yes	_____	_____
21. Has anyone, including family members or friends, ever attacked you with a gun, knife or some other weapon?	No	Yes	_____	_____
22. Has anyone, including family members or friends, ever attacked you without a weapon and seriously injured you?	No	Yes	_____	_____
23. Has anyone in your family ever beaten, "spanked" or pushed you hard enough to cause injury?	No	Yes	_____	_____

Other Events

24. Have you experienced any other extraordinarily stressful situation or event that is not covered above? If yes, please specify. _____ _____	No	Yes	_____	_____

If you have answered "yes" to any of the above experiences, please answer the following question:

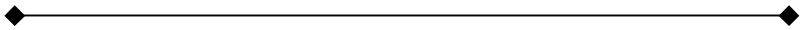
Have you ever sought psychological treatment related to any of these experiences?	No	Yes

APPENDIX E

DISTRACTER VIGNETTES

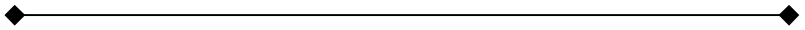
Following her night class at university, Judy walked across campus to her car, which was parked two blocks from central campus. A man, Charles, was walking in the same direction as Judy and began to follow her. Less than a block from her car, he approached her. Warning her to do as he said, he told her to lie down, after which he stripped her and had intercourse with her.

To what extent would you consider this incident rape?



Clearly not rape Clearly rape

How responsible is Judy for this incident?

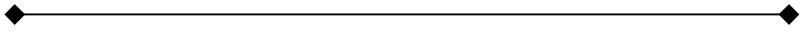


Not at all responsible Entirely responsible

How responsible is Charles for this incident?

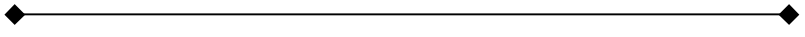
Not at all responsible Entirely responsible

How much should Judy be respected?



Not at all respected Highly respected

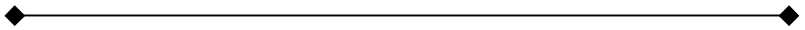
How much should Charles be respected?



Not at all respected Highly respected

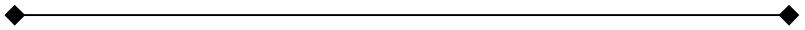
Following a night class at her university, Judy walked across campus to her car, which was parked two blocks from central campus. A man, Charles, was walking in the same direction as Judy and began to follow her. Less than a block from her car, he approached her. Slashing her with a knife, he shoved her down, after which he stripped her and had intercourse with her.

To what extent would you consider this incident rape?



Clearly not rape Clearly rape

How responsible is Judy for this incident?

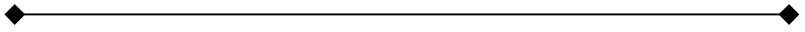


Not at all responsible Entirely responsible

How responsible is Charles for this incident?

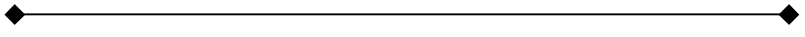
Not at all responsible Entirely responsible

How much should Judy be respected?



Not at all respected Highly respected

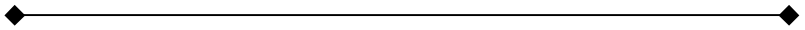
How much should Charles be respected?



Not at all respected Highly respected

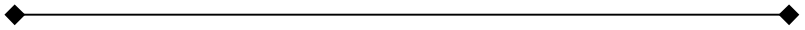
Carly and Luke are both third year students in college. They met when Carly decided to take tennis lessons to improve her game. Luke was her instructor. Soon after the lessons began, they began dating steadily. Later that semester, they were still dating and having more fun than ever. The only problem that they seemed to have was that Luke wanted to have sex and Carly did not. One night, in Carly's room, Luke would not take no for an answer and forced her to have intercourse with him. After it was over, Carly was upset, got up and left. Luke called her later to apologize, but she hung up on him.

How excusable is Carly's behavior?



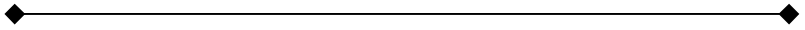
Completely excusable Completely inexcusable

How excusable is Luke's behavior?



Completely excusable Completely inexcusable

To what extent would you consider this incident rape?

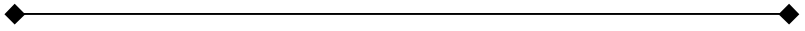


Clearly not rape Clearly rape

How likely is Carly to experience psychological damage as a result of this experience?

Not at all likely Very likely

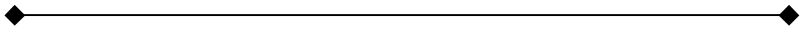
To what extent were Carly's rights violated in this situation?



Not at all Very much

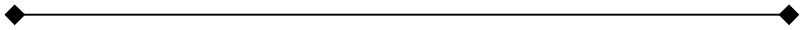
Carly and Luke are both third year students in college. They met when Carly decided to take some tennis lessons to improve her game. Luke was her instructor. Later that semester, they were still playing tennis occasionally. On the one time that Luke asked her for a date, Carly refused because she was not interested in him romantically. One day after tennis, Luke accompanied Carly home to borrow a book. Once inside her apartment, he forced her to have intercourse with him. After it was over, Carly was upset, got up and left. Luke called her later to apologize, but she hung up on him.

How excusable is Carly's behavior?



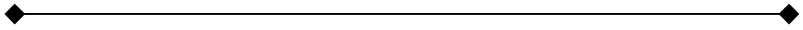
Completely excusable Completely inexcusable

How excusable is Luke's behavior?



Completely excusable Completely inexcusable

To what extent would you consider this incident rape?

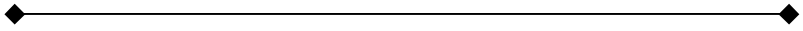


Clearly not rape Clearly rape

How likely is Carly to experience psychological damage as a result of this experience?

Not at all likely Very likely

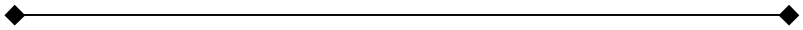
To what extent were Carly's rights violated in this situation?



Not at all Very much

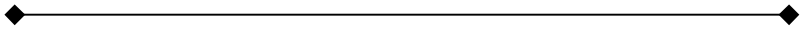
John is a 19-year-old young man from a poor family. His mother is a single parent and does not earn enough money to support her five children. The family often does not have enough food, and John's younger brothers and sisters do not have adequate clothes for school. One evening, John is walking down a busy street and notices that a woman strolling a few yards in front of him has her purse draped loosely over her arm while she talks on a cell phone. John approaches her from behind, grabs her purse and runs away while the woman screams for help.

How likable is John?



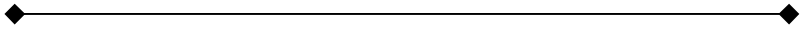
Not at all likable Very likable

How intelligent is John?



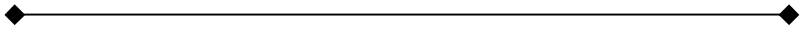
Not at intelligent Very intelligent

How trustworthy is John?



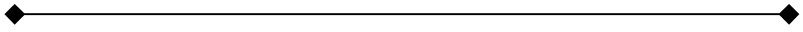
Not at all trustworthy Very trustworthy

How excusable was John's behavior?



Completely excusable Completely inexcusable

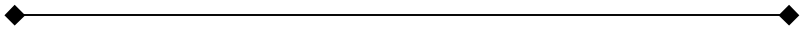
How severely should John be punished?



Not at all severely Very severely

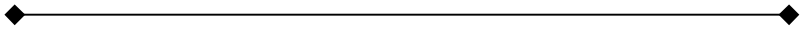
John is a 19-year-old young man from a poor family. His mother is a single parent and does not earn enough money to support her five children. The family often does not have enough food, and John's younger brothers and sisters do not have adequate clothes for school. One evening, John is walking down a busy street and notices through a store window a sales clerk emptying a cash register. John enters the store and produces a gun, threatening the woman that she must hand over the money if she wants to live. John grabs the bag of money and runs out of the store while the woman screams for help.

How likable is John?



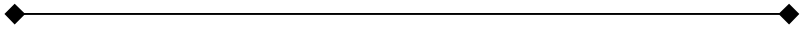
Not at all likable Very likable

How intelligent is John?



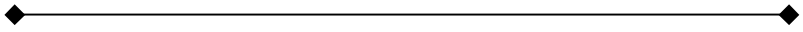
Not at intelligent Very intelligent

How trustworthy is John?



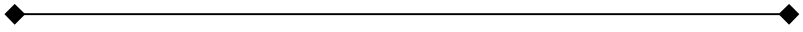
Not at all trustworthy Very trustworthy

How excusable was John's behavior?



Completely excusable Completely inexcusable

How severely should John be punished?



Not at all severely Very severely

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